



FRIDAY, NOVEMBER 16.

Contributions.

Creosoting Wood a Protection against Fire.

No. 24 PARK PLACE, NEW YORK, Nov. 14, 1883.
TO THE EDITOR OF THE RAILROAD GAZETTE:

The destruction of the Old Dominion Creosoting Works by fire on Oct. 31 last proved one fact, which would be scarcely believed, were its truth not thus demonstrated, that creosoted wood is not so destructible by fire as unprepared wood.

The building was of pine and spruce in their natural state except the sills, which were made of creosoted pine. The latter were set on posts and raised about a foot above the ground, so that the flames had a chance to get under them; they were charred, yet retain their form and a certain amount of strength, whereas not a piece of the untreated lumber can be found. A derrick 50 ft. high made of creosoted pine, with a 50 ft. boom of the same creosoted wood, stood on a base made of untreated pine; the latter was burned to ashes, leaving only the iron-work; but the mast and boom, although charred all over and burned at the top so as to disengage the plate to which the guys were attached so that the mast fell, yet are good for future use 45 ft. of their length. Another derrick of the same size, made of untreated pine, was completely burned up. And scattered over the premises are numerous creosoted piles and several thousand feet of plank all charred, but the pieces mostly retain their original form and a certain degree of usefulness. Strange as it may appear, the more thoroughly the wood was impregnated, the better the protection from fire; where the flames could reach the comparatively uninjected heart wood, they ate into it, leaving a charred creosoted shell. In all the above charred pieces the fire went out of itself; creosoted wood burns with a dense black smoke, which probably has a smothering effect. Creosoted wood, when on fire, is very readily extinguished by water. EDWARD R. ANDREWS.

The Best Motive Power for Street Railroads.

[Report presented to the American Street Railway Association at its recent annual meeting in Chicago by the Committee on Motive Power.]

Your Committee on Motive Power would respectfully submit the following report:

The subject of propelling street cars is by no means a new field of thought, but one to which many minds have lent their most earnest endeavors, in the hope of securing some means of dispensing with the use of animal power—that being the original and most common of way of to-day.

In discussing the problem of the different motive powers proposed or adopted to accomplish this end, we have, for convenience, divided the various systems into three classes, as follows:

1. Locomotive power, applied to surface roads.
2. Elevated railroads.
3. Cable railroads.

In the brief time allowed us for the reading of this paper we will not be able to undertake, as fully as we would like, to give the details of construction and comparative costs of the various classes of motors. And indeed to do so would be very difficult; as the local influences are so varied that the question of cost to meet one case would be totally different in the next. We will have to content ourselves, therefore, with the discussion of the general principles involved in each, leaving the details for further consideration.

Before going into the subject of the different devices suggested, for dispensing with animal power, we had better look at some of its defects, or, at least, the difficulties encountered. Animal power is divided into two classes—the horse and the mule. We find, in discussing the advantages of one over the other with street-railroad men, there is a wide difference of opinion on the subject; but, by looking upon it from an impartial standpoint, we believe that there are certain circumstances under which horses are preferable, and others in which mules can be used to the best advantage, the difference of opinion generally being where the line should be drawn. In point of appearance, horses are the most desirable; and where the traffic is very heavy, immense loads being hauled, horses having the most weight are better able to accomplish the work. This is also true when snow-storms are encountered, as the draught is very materially increased under such circumstances.

On the other hand, it is claimed that horses are much more susceptible to both blemish and disease; that the percentage of disabled horses in a given number will be three or four times that of mules.

In New Orleans, for instance, where snow-storms are rare, with no grades, where, for a large portion of the year, an excessive heat prevails, mules, beyond any question, are the best. As you go north and encounter grades and severe winters, their advantage decreases; until, finally, you find all the advantage on the other side, horses being preferred in such cases.

By actual experiment it has been found that the expense of feeding and caring for the horse is very much more than for the mule.

One of the difficulties encountered in the use of mules is the tendency in large mules of sufficient weight to compare favorably with horses of being very slow. Mules that are said to be best adapted for use on street railroads are the medium sized ones, in which class, it is claimed, are the largest number of free drivers, which is very necessary to their successful use.

In connection with the subject of animal power, we feel that a word should be said on the subject of car-starters, since the aim in the minds of many inventors, who have spent much time and money in both trying to perfect, and, we may say, in perfecting a mechanical device, that will utilize the momentum of the car, lost in stopping, to be applied in the direction of starting the car.

This thought grows out of the fact that the great majority of people believe, and, indeed, it is a very common expression heard on board street cars, that the great wear and tear of the animal is in making the start, and that when a

car is in motion it requires little or no exertion on the part of the team to keep up the speed. This, to a casual observer, would appear to be the case. For instance, when you see the animal straining and tugging to start an immense load of passengers, and when started, notice, at once, the comparative ease with which they draw the same, such a conclusion seems to be the right one.

The fallacy of this is easily proven, however, when the subject is thoroughly investigated.

Regarding the durability of machinery, whether it be a cutting box or a steam engine, we should examine it when it is worn out, or, at least, when it approaches its end of usefulness, to find out and strengthen its weakest parts. Why not apply this rule in examining the worn-out horse (our machine)? We look, in doing so, for the weak points first, those points that are most susceptible to wear and tear, and, we find them where? In the legs, of course. We have heard horsemen say, as we believe truly, that one body would wear out ten pairs of legs in street car service.

Worn-out street car horses, as a rule, have all their parts intact at the time they are abandoned for service, except their legs. We should go a little further, and confine it to the lower part of the legs, where we find the delicate muscles and sinews that form the ankle and knee joints. These appear battered and bruised, the adjoining bone unhealthy, the hoof diseased, but otherwise an able-bodied, well animal. If it were in our power to do it, we would, as with worn-out machinery, replace the worn-out parts; there would be no necessity for dispensing with animal power, as, this evil remedied, our rejuvenated machine (the horse) would be a most durable one (if price of legs were not too high). This much being allowed, examine the horse in the act of starting a load to find which of the leg muscles or joints are most actively brought into service. Are they the muscles from the knee down? Are they those delicate joints? Or are they the heavy muscles of the thigh—those muscles that, in a worn-out horse, are so perfect? We think the latter, for the reason that a disabled street-car horse with the joints misshapen, and lower muscles partially disabled, is still an animal capable of pulling an immense load, slowly—going to show that its ability to start heavy weights is still perfect, the difficulty being in its power of rapid locomotion, in proof of which, horses that cannot travel fast enough to be of service, will pull the heaviest load with perfect ease, indicating that the other pulling muscles are intact, and good to the end. You have observed, perhaps, to what good use worn-out car-horses can be put on farm work—ploughing and the heaviest sort of hauling. The greatest draught horses are very often from the worn-out street-car horses, where no speed is required, but great strength. A horse will pull a plough or heavily loaded wagon 9 or 10 miles a day, and yet 10 or 15 miles' travel on a street railroad is all we can reasonably hope to get as a day's work. If our data are true, then that in a worn-out horse we find those muscles in a perfect state that are brought in action in starting a load, and the defective muscles and joints those that facilitate him in speedy travel, it would also follow as a logical conclusion that the great strain and tugging in the starting of a load is not nearly so injurious as that "hammer, hammer, hammer," on the delicate parts of the lower muscles and joints, when the horse is traveling, apparently doing no work at all.

To state the proposition in a different way—it is the miles traveled, and not the load pulled (within certain limits, of course), that destroy, and make our horses unfit for use. If, then, as we say, the argument is a false one that the "great object to be attained to save horse flesh" is to avoid the strain at starting, we, at once, have taken away from under the car starter theory all the ground it had to stand on; and if it were possible to make a machine so simple and durable in all its parts that there could be no complaint on the score of economy, even then, in our judgment, a car starter is a failure. It is an attempt, we believe, to perfect the strongest part of a machine instead of the weakest; and, as the measure of strength is always that of the weakest, we have gained nothing.

We will next look a little into the subject of locomotive power as applied to surface roads.

Now we are in a wide field. We have, first, the ordinary steam locomotive, built with a view of being useful in the public streets—we will say noiseless, smokeless and beautiful to the eye. Then we have the fireless locomotive, receiving its charge of steam at the end of the route from stationary boilers. We have, also, the pneumatic engine, very closely allied to the fireless engine, the difference being in a charge of compressed air in one case, and a charge of steam in the other. Electric engines are also in use, receiving their power from an electric current generated by a stationary steam engine, and transmitted to the car by utilizing the rails of the track to form part of the circuit. We have heard suggested, but never tried to our knowledge, the application of a gas engine, that utilized the explosive power of gas as a motor. All of this class of motors rely entirely upon applying motive power so as to rotate the wheels of the car or motor, obtaining their locomotion from the friction between the wheels and the rail. In this they resemble steam railroads, but encounter difficulties that steam railroads know nothing about—our curves, being of necessity of a very much shorter radius, and grades being in the highway, are fixed by the laws of chance, or bad engineering.

Even in cases where we are fortunate enough to have a straight and level road, we still have the grit and dirt to contend with that is necessarily present in all thoroughfares. Our track being forced on level with the surrounding road-bed, and not elevated above it, as our neighbors; add to this the snow and ice difficulty, and you have a complete picture. For instance, a number of able-bodied passengers assisting to start a car, with the usual kind words for the management heard on such occasions.

It may be said, in answer to this, that New Orleans has had in successful operation for years steam locomotives applied to their street railroad system. While this is true, the limited way in which it has been used, never having grown at all in its many years of service, proves that even there, under the most favorable circumstances, it has not been very successful. New Orleans uses locomotives on a straight street, without a grade or curve, the track being located in that part of the street not given to the travel of other vehicles, on what is known as "neutral ground" or lawn, situated in the centre of the street, on which the street railroad track is laid. They only have street grades to encounter at the intersection of cross-streets.

They first adopted on this road what was known as the fireless system of steam engines, getting their heat and pressure from a stationary battery of boilers at one end of the line, obtaining from that sufficient steam to make, at least, one trip. They have since changed this by adding the firebox to the locomotive, so as to generate its own steam.

Only under the most favorable circumstances have they been able to keep their road in successful operation with the steam motor. They have never ventured to use it in the busy part of the city.

For ordinary street car service, this system presents no advantages, to our mind, over what we have.

The same argument applies with equal force to the use of all motors of this class, namely, the inability to secure friction sufficient to propel crowded cars under difficulties, un-

less invention devises some means of increasing the traction of the motor beyond the weight of its load. Cog-wheels would do it; but it is absurd to think of such a thing in practical use.

We claim, in conclusion, in speaking of this class of motors, that they have an insurmountable barrier to overcome, so long as they rely upon merely rotating the wheel to apply that power. In this, of course, we are taking for granted the fact that they can produce a machine of sufficient durability and simplicity to be easily controlled by the class of men ordinarily employed on street railroads.

As to elevated railroads, they are, strictly speaking, not one of our class. We are bound, however, to recognize this fact, that there is a point beyond the abilities of our ordinary system of surface roads to do the work required, and when this point is reached the elevated road becomes a necessity, especially when a great number of passengers over a given line are to be carried a long distance, in which the time occupied in making the trip the ordinary way is too lengthy—condemning, as it does, a vast community to an imprisonment in a street car for several hours a day, which in the course of a year amounts to many days. For instance, a passenger having 7 or 8 miles to travel daily from his home to his place of business and return will, on an average, consume three hours a day in a car, though he only makes the trip morning and night. This, for a year, amounts to about 30 days' car riding. The idea of being condemned to 30 days' imprisonment in a street car, even to the most ardent admirer of our profession, is not an agreeable thought.

The great expense and cumbersome appearance on the street will, of course, retard their growth until to build them becomes a necessity. In our opinion there are but few, if any, opportunities for the successful building of elevated railroads in addition to those already constructed.

We now come to the cable system of railroads. This is a system which utilizes the power of a stationary engine to operate cars at will, miles away from the source of power, transmitting the power by the medium of an endless cable to the point required, and at the necessary time. This system, in our judgment, though as yet in its infancy, is on the right road to solve the problem of dispensing with animal power; a system, instead of a disadvantage, and less serviceable on heavy grades, and in the midst of snow storms, furnishes at such times a superabundance of speed and ability to resist obstacles—a system that does not depend upon the friction between the wheels and the rails for its power of locomotion—a system that enables street railroads to handle immense crowds by the simple addition of a few more bushels of coal and the putting on of extra cars without the fear of overloading its animals, and killing more in one day than its profit would be in a month; giving us, in other words, more latitude in the way of economizing in dull times, without having horses to feed, or not, and furnishing ample means of expansion on short notice, without the necessity of hiring extra animals for such occasions.

Do not mistake our eulogy of this system by believing that we are blind to its faults, as it is of its faults that we desire, most fully, to be heard, hoping that in the discussion of the difficulties in its way we may encourage the already stupendous efforts in the direction of curing them. We realize that there are many with ample means laboring for the attainment of this very end.

Their success, to our mind, is but a question of time. The cable road, as it is to-day, is only available under the most favorable circumstances: First, it requires a magnificent business, for the reason that the outlay is so great that an enormous sum is eaten up in paying interest on the cost of construction. It requires a comparatively straight road for the reason that, as yet, the turning of curves in an economical and simple manner has not been accomplished, to our knowledge. There are a number of minor defects which are always found in new machinery. These can only be remedied by time and experience. But minor troubles should not discourage us in the least, our main objection being to the two points above stated—the first, the heavy outlay involved, is not so serious a matter, as we see indications of a simpler and more economical construction being developed. Add to this the very low price steel has reached, with a still downward tendency, we are of opinion that the cost of road-bed construction, will, in a short time, be greatly reduced. As to the difficulty they have in accomplishing curves, we are quite sure that invention will devise some means of curing the evil. The system, as it is now, has as its first objection the great expense in the maintenance of auxiliary cables; but, with all its defects, it gives to us great hope.

We believe, in conclusion, that the only practical means presented to our view of dispensing with animal power is the cable system. At present the cable road is confined to a few favorable localities: but rapid strides are being made in the direction of its perfection, which will surely result in bringing this motive power within the reach of roads less favorably located.

Concluding, we will add: Beware of "car-starters," and lend a helping hand to those trying to perfect that system which is, at present, our only hope for dispensing with the noise and expense of animal power.

A Ride Over the Lima & Oroya Road.

From a recent private letter the New York Evening Post takes the following account of a journey by rail in Peru, made by an officer of the flagship "Hartford" in company with the Admiral and his staff:

To visitors to Lima the Oroya Railroad will ever be a source of interest and wonderment. It was originally intended to connect the Peruvian seacoast with the headwaters of the Amazon, and establish communications with the rich silver mines of Cerro de Pasco. The project had been a long-cherished one, but the difficulties to be overcome proved so great that it was only after surveying three routes that the present one of Oroya was deemed practicable. In happier times the Peruvian Government bore the expense, amounting to \$25,000,000, although only 86½ miles have been completed, and the object is still some hundred miles from attainment. But this, the most difficult part, was undertaken by Henry Meiggs, the famous American contractor, and with the help of American engineers successfully accomplished, in spite of the greatest obstacles, both of nature and climate. Many thousands lost their lives during the 4½ years this work was progressing; and, singularly enough, at the highest elevations, many died of fevers and malaria. A disease called the Ferrugas was also generated, very peculiar in its effects. It caused great red warts to appear all over the body, and the blood turned to water. In many cases death resulted.

To give some idea of the amount of work done, it will be sufficient to mention that 40 tunnels occur in the space of as many miles. The highest point reached is Chibila, that being 12,220 ft. above the sea level, or about 2½ miles. The longest tunnel is about 500 ft., and in one place the road zig-zags up the mountain for three miles to reach an elevation of 700 ft. This produces a most peculiar effect upon the travel-

ler, as in several places he sees three lines of road, one above the other.

There are many bridges spanning wonderful chasms, where thousands of feet of living rock tower above fathomless abysses. These bridges are built mostly of iron, one of them being 575 ft. long and at its centre 252 ft. high. Further on one comes to the "Puente del Infernillo," which is well named, for the imagination of Dante or Doré could conceive of nothing more terrible and grand.

The sky was bright, and the sun, shining high up among the mountains, produced a red glow which, reflected from

The soil appears to be a yellow clay, utterly unproductive save near the river's side, and the generally sombre aspect is heightened by the dark, rocky peaks, that are piled in sierra above sierra until they reach the clouds. There were few signs of habitation, and such people as we saw appeared poor and miserable. The villages, small collections of mud huts, hardly deserved the name, and cultivation was still carried on with wooden ploughs, women more often than men guiding them. The country people preserve many evidences of their Indian origin, and faces of the Inca type may still be frequently seen; but they are an oppressed and

burned and deserted dwellings, whose inhabitants, if not slain, have fled to the mountains for safety. Eucalyptus trees may be seen in nearly every village, and are said to have their usual good influence in keeping off malaria.

On reaching Chicla, the highest point on the road, we alighted from the engine, and soon found ourselves all more or less affected by the rarefied condition of the atmosphere. Headache and extreme lassitude, often accompanied by nausea or palpitation of the heart, constitute the usual symptoms. It is said that a person's chest

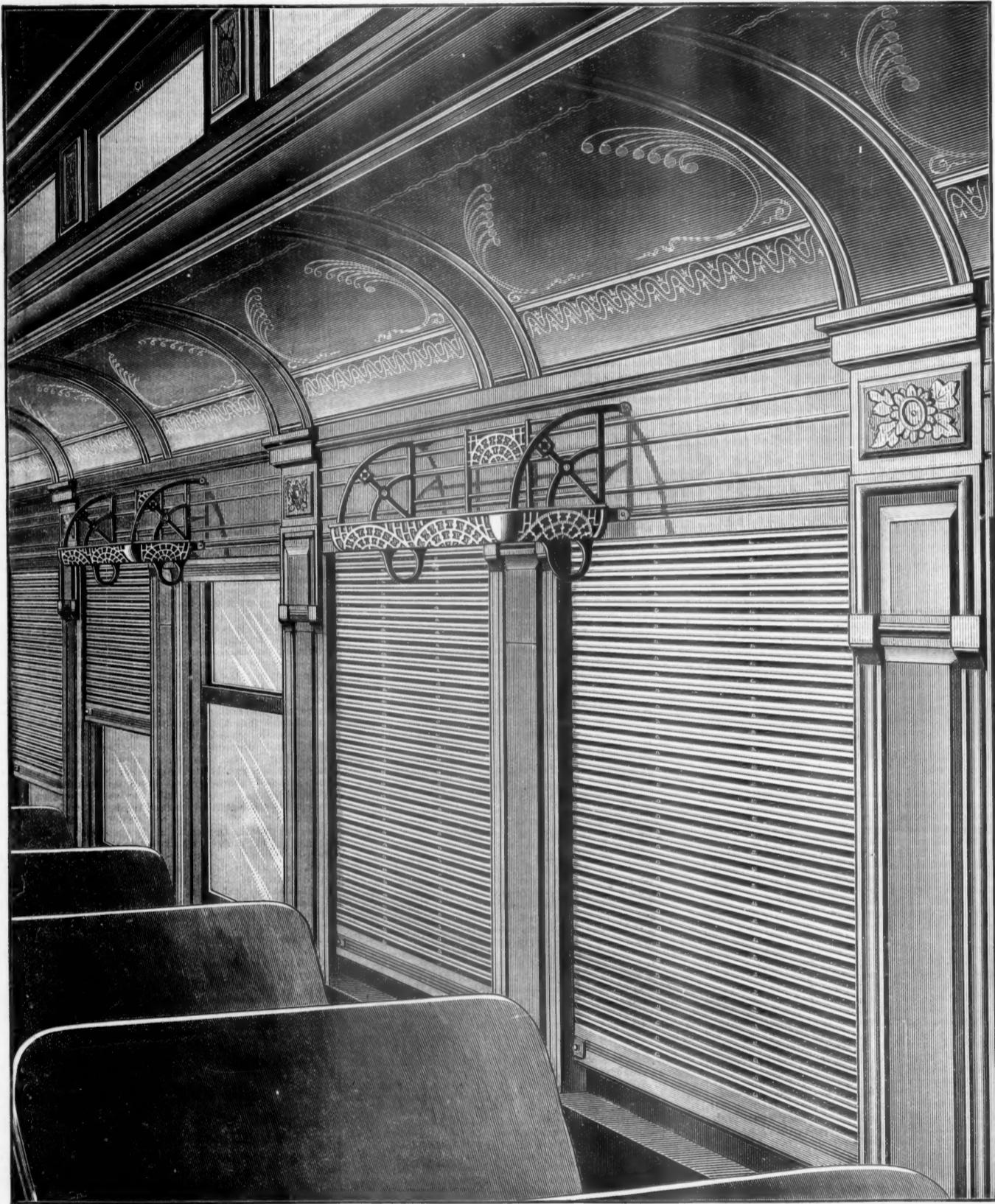


Fig. 1.

WILSON'S FLEXIBLE CAR-WINDOW BLINDS.

the light yellow rocks, looked like flames—especially upon emerging from the dark tunnels through which we had dashed, amid a shower of sparks and clouds of smoke. We were in an observation engine, and made very fast time, averaging $3\frac{1}{2}$ minutes to the mile going up, one of the managers of the road, who accompanied us, running the engine himself. The road is extremely well built, but in some places is unprotected from landslides, and the slightest accident occurring upon one of the sharp curves would lead to fatal results. The scenery, in spite of its grandeur, was not pleasing or beautiful. For some distance out of Lima one sees the usual purloins of tumble-down houses, mud walls and small factories. Beyond that the road follows for most of its way the course of the River Rimac, a small stream, which, however, in times of flood becomes an overflowing torrent.

miserable race—as they have been since the time of the "Conquistadores."

We saw fields of corn, cotton and sugar-cane interspersed with meadows of the long alfalfa grass in the valley of the Rimac, and occasionally ruins of the old Inca pueblos broke the monotony of the landscape. These latter are built of large blocks of clay, the walls being very thick, and the edifices clustered together, many of them under a common roof, as in the ruins found in Texas and New Mexico. The country must have been very thickly populated in former times, and the evidences of past cultivation are even now truly remarkable, consisting in some places of the traces of extensive terraces up the sides of almost inaccessible mountains.

At all the villages along the route companies of Chilean infantry were stationed, and sad evidences of the war exist

will increase 2 in. in girth during a stay of a few months in these altitudes, and the mountaineers are noted for their development in this respect. They sicken and die when removed to the seacoast. At Chicla we saw a flock of llamas wending their way up the steep mountain sides—a novel and interesting sight. The place boasts a dirty-looking hotel, kept by Germans; but having come amply provided with all things needful, we were not obliged to test its capabilities.

We returned to Lima at a very rapid rate, using steam on the brakes alone, owing to the down grade, and reaching our destination just twelve hours from the time of departure.

Like ascending the pyramid and climbing Vesuvius, it is an experience unique in itself and pleasurable in its memories.

Wilson's Flexible Car-Window Blinds.

The engravings herewith represent a very convenient and neat form of window blind which has been introduced by Mr. J. G. Wilson, whose office and factory is at No. 527 West Twenty-second street, New York. Fig. 1 represents a perspective view of the inside of a car, showing a number of windows with their blinds in various positions.

Fig. 2 shows a section of the side of a car, showing the arrangement of the blinds in the car, and fig. 3 is a full sized section of a number of the slats, and shows their form and the manner in which they are connected together.

In fig. 2 the sections of the slats *S S* are represented in solid black. These are strung together on a wire *W W*, fig. 3. Each slat has holes *H H* bored through it for the wire *W* to pass through. These holes are counterbored, as shown plainly at *C C*, in the upper slats. Into these counterbores coiled wire thimbles *D D* are inserted, which serve to keep the slats the proper distance apart, and are at the same time sufficiently flexible to allow the blind to bend in sliding up into the curved groove *G G*, fig. 2. In fig. 2 the blind is represented in the position it occupies when down. When it is pushed up into the curved part of the groove it leaves the window entirely clear, with all the glass exposed, and thus affords an uninterrupted outlook to persons standing up in the car. This blind is very easily operated and has a latch which will hold it in any desired position. It makes a very neat finish in cars, and can be made of any desired size. The space which they occupy in the side of the car is so much less than that required for ordinary blinds, that the car can be made 2 in. wider inside than cars with ordinary blinds.

These blinds have been adopted on the Northern Pacific, the New York, West Shore & Buffalo and the Long Island roads. There are 50 cars fitted with it on the first-named road and 75 on the West Shore line.

Blinds of a similar character are made for the windows of dwellings, vestibule doors, piazzas, etc., and when used for these purposes are usually made to roll up on a roller placed either above or below the blind. In his illustrated catalogue Mr. Wilson shows an arrangement for windows of dwellings, offices, etc., in which the blinds are made in two sections, the upper part of which is made to roll on a roller above the window, and made long enough to cover about two-thirds of it. The lower portion slides up and down in a straight groove, similar to the lower part of *G G*, in fig. 2, and covers the lower half of the window. This portion of the blind may be counter-weighted if desired. It makes a very convenient window screen and serves an excellent purpose in regulating the light. Comparatively few persons seem to know how much more pleasant and effective light is for indoor work if admitted through the upper instead of the lower part of the window. A little experience with the blinds described would soon convince them of this.

Mr. Wilson also manufactures close shutters—that is without spans between the slats—which exclude light, rain and air. These are used for store and stable fronts, book-cases, shelves, partitions in schools, club-rooms, hospitals, etc.

It should be added that the rollers used for these blinds usually have springs by which the weight of the blind is counter-balanced, thus making it very easy to run.

Stopping Freight Cars in Bad Condition.

At an informal meeting, held at the Tiff House, Buffalo, N. Y., Nov. 7, the following roads were represented:

Grand Trunk.
New York Central & Hudson River.
New York, Lake Erie & Western.
Michigan Central.
Lake Shore & Michigan Southern.
Lehigh Valley.
New York, Chicago & St. Louis.
Pennsylvania & New York.
Rochester & Pittsburgh.

After considerable discussion of various subjects relating to the condition of cars in interchanged traffic the following was unanimously adopted:

"Whereas, There are in through service a number of freight cars which are in general bad condition and should be withdrawn from such service, in order to facilitate the movements of freight and prevent delays and transferring loads at interchange points; and,

"Whereas, Much trouble arises from overloading cars, especially those with light axles and small journals, causing many hot boxes with other detentions which frequently occurs from the transferring a load from a 40,000-lbs. capacity car into one of less capacity; and,

"Whereas, Serious trouble frequently occurs from the improper distribution of the load from all classes of cars;

"Resolved, That the sense of this meeting is that a request be made upon all roads maintaining inspectors at interchange points to report cars in general bad condition, giving the number, line, owner or initial, and that the owner be notified with a request to withdraw such cars.

"Resolved, That it is the sense of this meeting that the attention of the general superintendents be called to the importance of these matters, with a request that they give such instructions to the proper officers as will remedy the evil complained of.

"Resolved, That the Secretary of this meeting be instructed to notify the joint inspectors at Black Rock and East Buffalo, to notify each party for whom he inspects of all cars presented for interchange, which in his judgment are not fit for through service, giving the number, line, class and initials of each car.

"Resolved, That the Secretary instruct the parties employing the joint inspectors at Black Rock and East Buffalo, on receipt of notice from such inspector of cars in general bad condition, to notify the owner with a request that they give the matter special attention."

The meeting then adjourned to meet at the Tiff House, Buffalo, Dec. 12, at 10 o'clock a.m.

WILLIAM MCWOOD, Chairman.

J. S. LENTZ, Secretary.

Punishment of Employes for Railroad Accidents in Mexico.

The following article, from the *Mexican Financier* of Oct. 27, indicates some of the difficulties met with by railroad employés in Mexico:

Our esteemed contemporary, *El Siglo XIX.*, takes exception to the views in our issue of last week concerning the responsibility for railway accidents. The *Siglo* states its objections clearly and excellently, but, we fear, falls short of the main point of the question. Our motive was to call attention to and induce the reformation of the injustice practiced toward railroad employés, and which tends to impede the successful working of the railways, and also threaten the safety of the traveling public. Our ground

ies, or from the friends of the accused, in consideration of their release. This is nothing more nor less than blackmail, and we ask our contemporaries if officials guilty of such conduct are not more deserving of arrest and incarceration than their victims?

Suppose a drunken man to be lying upon, or staggering along, a railway track at the point where the line makes a sharp curve. An express train comes dashing along; the man takes no heed of the noise behind him, the curve prevents him from being seen from the train, and he is, of course, run over and most likely killed, for being in a place where he had no right to be. The train hands, though not in the least responsible, seeing a prospect of a horrible and indefinite imprisonment, choose the alternative of fleeing the country and accordingly desert the train on the spot. Perhaps another train may be coming along behind; the

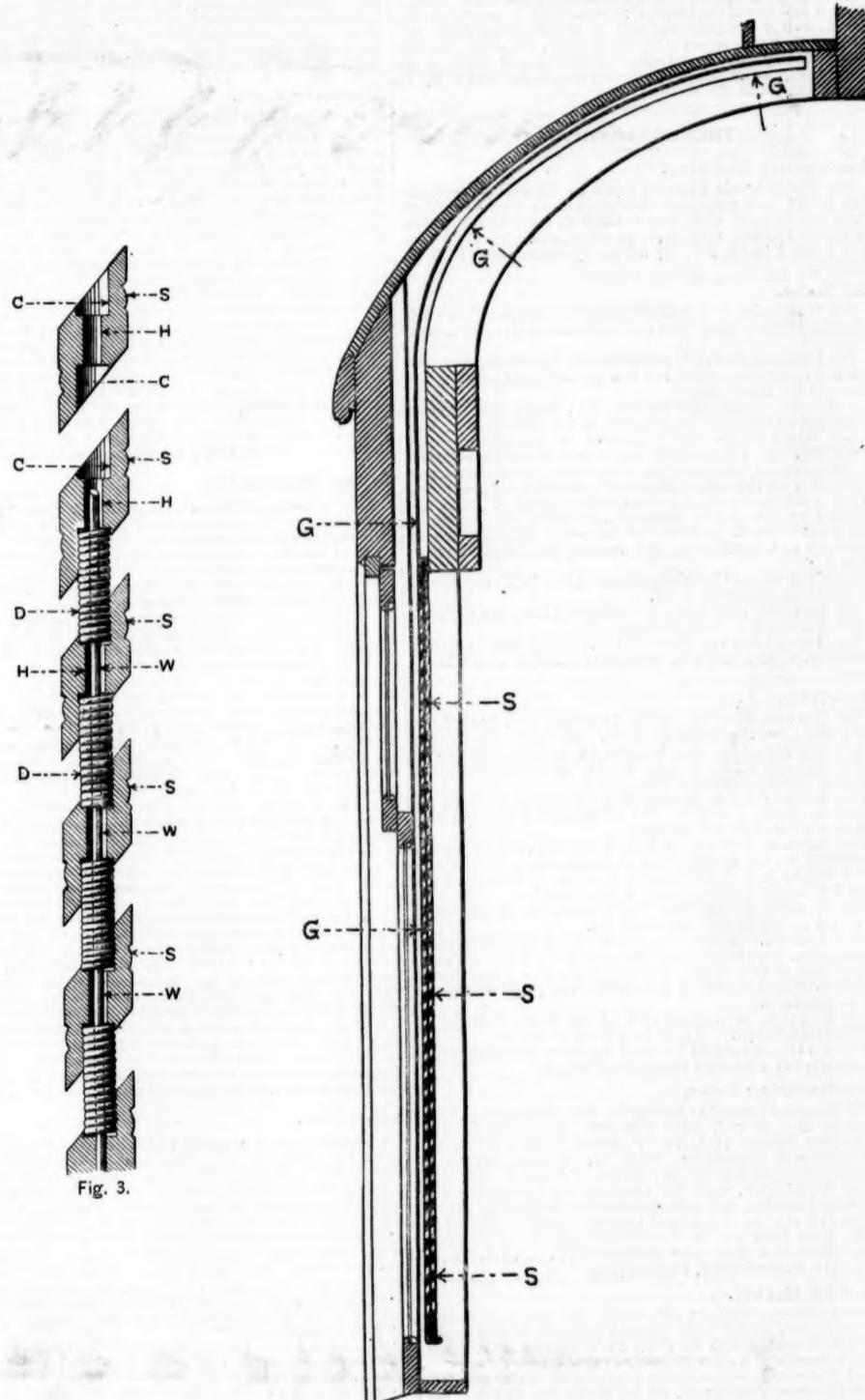


Fig. 2.

WILSON'S FLEXIBLE CAR-WINDOW BLINDS.

was that the action of the local authorities in arresting locomotive engineers and other employés, and keeping them indefinitely in prison, when the trains in their charge ran over persons on the track who had no business there, was in conflict with the regulations of the Federal government forbidding people from entering upon the tracks, and therefore illegal. It strikes us that in a matter so important to the whole nation and to the public at large as the secure and convenient operation of the railways the authority of the Federal government should be superior to that of municipal officials, and since it has become a grave abuse no time should be lost in applying the remedy through effective legislation, if the present laws are insufficient to cover the case. We believe that our contemporaries would agree with us as to the desirability of attaining these ends. And that the matter has become a grave abuse it can easily find out if it will take pains to investigate the facts.

Men are thrown into prison and kept there for months and months without trial, simply because the trains which they had in charge ran over persons who were on the track in violation of law, and whose death, due to their own carelessness, was unavoidable. Cases are instanced where village prefects have kept innocent railway-employés, thus arrested, in prison for many months without trial, simply with a view of extorting money from the railway compa-

nies, or from the friends of the accused, in consideration of their release. Such a contingency is not unlikely under the present conditions.

We have pointed out that the liability of arrest for something for which a train-hand cannot be held responsible—a liability to which every train employé is now subject every day of his life—and a consequent languishing for months and months in a filthy jail, to come out, very likely, broken in health for life, and with no means of redress; we have pointed out that all this discourages the best class of railway employés from coming to Mexico, where they are wanted. On the contrary, it invites into the field the worst class, men of no character and responsibility, who do not care how they treat the public and are ready to "skip" at the first provocation—men, in short, of the character of two brutes (who, by the way, were not Americans) who some months ago indecently assaulted a young lady on the principal street of this city. Such men are not fit to be entrusted with the lives and property of the public, and yet it is the fault of the foolish practices in question when it is found difficult to secure better ones.

It is true that in the United States railway hands sometimes flee after the occurrence of an accident, but then it is under a sense of guilt for the disaster, and a knowledge that their carelessness has made them liable to a speedy trial and

conviction for manslaughter. But here in this country the innocent die as well as the guilty, or perhaps the latter may even remain and go free. In Mexico, also, the safety of the public, and the good operation of the railways, demand that when accidents occur they should be promptly investigated, the responsibility fixed, and if any person may be accused, that they should be granted a speedy trial with a prompt acquittal of the innocent and an adequate punishment of the guilty.

In the light of the foregoing our contemporary will see that it is not true that there already exist, as it claims, "adequate provisions for the consideration of the rights of the companies, the personal security of their employés, the good service of the public and the necessity of proceeding with promptness and energy in the cases where any transgression has occurred." Neither is it true that the railway companies are in accord with the present state of affairs, for their managements state that the reform of the abuse in question is necessary for the successful operation of the lines. Therefore, if additional legislation is necessary to prevent this crying evil it is important that it should come from the present Congress in order that next year, when the opening of the new railway lines brings people from all parts to be our guests, the existence of the evil should not hold us up to the ridicule of all the world.

THE SCRAP HEAP.

Locomotive Building.

The Pennsylvania Railroad shops at Altoona recently delivered 13 new passenger locomotives to the New York Division. Five of these are of Class K, with 18 by 24 in. cylinders and 6 ft. 6 in. drivers; the remaining 8 are of the new Class P, with 18½ by 24 in. cylinders and 5 ft. 8 in. drivers.

Car Notes.

The Wason Car & Foundry Co. in Chattanooga, Tenn., is building 100 ore-dump cars for the Alabama Great Southern road.

The Litchfield Car & Machine Co. in Litchfield, Ill., has taken a contract to build 100 box and 200 coal cars for the Texas & St. Louis road.

A dispatch from Huntingdon, Pa., dated Nov. 4, says: "The sale of the personal property of the Huntingdon Car & Car Wheel Works was completed by Sheriff Geissinger yesterday, the proceeds of which amounted to \$48,000. The proceeds of the sale of the real estate, it is believed, will fully cover all the claims that have thus far been presented, and it is definitely settled that a stock company of capitalists will be formed to buy in the works, increase their capacity and capital stock, improve the property by additions to buildings and machinery, and resume operations immediately."

The Youngstown Car Manufacturing Co., in Youngstown, O., has its shops full of work.

The Lafayette Car Works in Lafayette, Ind., are building 1,000 box cars for the Lackawanna line.

The Missouri Car and Foundry Co., in St. Louis, has taken a contract to build 300 box cars for the Texas & St. Louis Road.

Iron Notes.

The Danville Steel Works at Danville, Pa., have been closed and have suspended payment. The liabilities are said to be about \$200,000. The concern was formerly known as the Co-operative Iron & Steel Works, and was reorganized under the present name not long ago.

The North Chicago Rolling Mill Co. has shut down its works at North Chicago. The company's South Chicago and Bay View Mills are running.

The Cambria Iron Co. at Johnstown, Pa., is putting up machinery for the manufacture of steel nails.

The rolling mill of the Sharon Iron Co. at Sharon, Pa., started up again last week after a short stop.

The Chartiers Iron & Steel Co., limited, has begun work on a new rolling mill at Mansfield, Pa.

P. H. Laufman & Co.'s iron works at Apollo, Armstrong County, Pa., have been consolidated with the Voita Galvanizing Works of Pittsburgh. The concern is now a joint stock company, with a capital of \$300,000. The plant at Apollo will be enlarged.

It is said that the rolling mill of the Roan Iron Co. in Chattanooga, Tenn., will soon be started up again.

It is said that several of the steel rail mills are considering the question of a general reduction in wages.

Manufacturing Notes.

The Diamond State Car Spring Co. was organized in Wilmington, Del., Nov. 1, with \$100,000 capital stock. The officers are Nathan H. Davis, President; Lewis C. Gratz, Secretary and Treasurer; Pusey A. Walton, Manager. The company has bought the works of James P. Hayes & Co., in Wilmington, with the intention of continuing the business of making car springs, and extending the trade, adding to it the use of four new patents which it owns. The works have been put in repair and a number of new machines are to be added. The company will have its offices at No. 411 Walnut street, Philadelphia.

The Rail Market.

Steel Rails.—Quotations for small lots continue at \$37 per ton at mill, but for large orders for winter delivery they may now be put at \$35 to \$36. It is said that at these prices some of the mills will prefer to shut down.

Rail Fixings.—Quotations continue at \$2.60 per 100 lbs. at Pittsburgh for spikes, \$3 to \$3.25 per 100 lbs. for track-bolts and 1.9 to 2 cents per pound for spiced-bars. The market is dull.

Old Rails.—The market for old iron rails is firmer. Sales are reported at \$24 per ton in Philadelphia for tees and \$25 for double heads.

Passengers on a Japanese Railroad.

Let us look at our fellow passengers in the car. As it is an early train there are various officials going to Yokohama for their daily business. These men are dressed in foreign clothes, and many of them understand some foreign language, English or German. They are mostly an intelligent looking group of men.

Besides these somewhat foreignized natives we have the real, genuine native article, with nothing foreign about him unless it is a hat. Hats are very generally worn, except it is a rainy day, when they are left at home, and the wearer goes bareheaded.

The Japs are peculiar. On a cold, rainy day they go about with their dress skirts caught up to their waists, and the water streaming down their bare legs. Skin does not cost as much as cloth, you know. In the car we see this native dress; a loose robe with no buttons, but folded over the breast and fastened by a sash. This is the dress of the men as well as the women. Some of the dresses are very rich indeed, being made of beautiful silk. One-half is longer than the other, which allows for pulling up above the sash, and then hanging down in front, making a pouch. This is the pocket where nearly everything is carried. There are also pockets at the bottom of the large square sleeves. Suspended from the sash is a little box and a leather wallet.

Sometimes these articles are exquisite and very costly. The box contains the tobacco pipe, and the wallet contains the tobacco. The box is frequently made of ivory or bronze, finely worked. Japanese tobacco is very, very mild. The average American smoker would disdain to use it.

The pipes consist of a long slender stem, and a tiny brass bowl not so large as an acorn cup. The smoker opens his wallet, takes out a very small quantity of tobacco and fills his pipe; then he takes out his box of matches, which are like the parlor match in America, contained in a sliding box (that horrible nuisance, a sulphur match, doesn't exist here); closing the match box about two-thirds, the pipe is lighted and three whiffs of smoke taken—very seldom more than that; the ashes are then emptied into the open third of the match box, the pipe refilled and lighted from these ashes. Frequently the ashes are dropped on the floor until the pipe is relighted, when they are extinguished. A pipe is seldom refilled more than three times, when it is put back into the case. The whole amount of tobacco imbibed would not be equal to one puff of a strong cigar. But the most universal practice here is to draw all the smoke up, expelling it from the nostrils instead of the mouth. Women smoke as well as men.—*Boston Transcript*.

Magnetic Rails.

A well informed trade contemporary says: "A professor of the Faculty of Sciences of Marseilles, together with two permanent way engineers of the Paris-Lyons-Mediterranean Line, has just made some curious experiments on the rails laid between Marseilles and Roqueac. They have ascertained that all the rails that have been laid some time have been transformed as to their two extremities into powerful magnets, capable of attracting and holding iron kegs and even stronger articles. If the rails be raised they keep their magnetism for some time, but gradually lose it. Two poles are formed at the corresponding ends of two rails of opposite sign. The production of magnetism in the rails in use is to be explained by the friction resulting from the running of cars on the truck. It is certain that the magnetism thus developed exerts a useful influence on the stability of the track and increases the hold of the wheels on the rails." Without contesting the fact itself, which does not appear very surprising to us, we should be glad to know how far this magnetism can increase the hold of the wheels, which in a locomotive often carry four to six tons each, above all when the rails are placed end to end, and mutually destroy one another's magnetism.—*L'Electricien*.

In the Sleeping Car.

Very amusing incidents sometimes happen in sleeping cars, owing to the ignorance of untraveled people as to utilizing the limited facilities for dressing, etc. An occurrence of this kind took place on the Bee line a few days since, which caused some consternation among the ladies and considerable amusement to the male passengers. A nice-looking old couple were seated in one of the sections of the New York sleeper, and, beyond being a little restless, attracted no special attention until after leaving the Grand Central Station. Immediately after the train pulled out, the old gentleman stopped a brakeman who happened to be going through the train, and told him they wanted to go to bed. He was referred to the colored autocar who presides over that department and gives an able imitation of a mad blacking boot. After some little talking the old gent explained his wants, and his berth was made up. He then wanted to know where the dressing-room was, and the ladies' dressing-room being pointed out, both he and his wife entered. Although this was a rather unusual proceeding, nothing was said about it, and as the train leaves about 6 o'clock in the evening, and it was a little too early to go to sleep, the balance of the passengers distributed themselves around the car, and nothing more was thought about the old couple until a slam of the door and a snort of laughter from some innocent youth attracted the attention of all the occupants of the car to a grand triumphal march executed by the old couple from the dressing room to their berth. They had disrobed in the ladies' dressing room, and the old lady had apparently nothing on but her robe de nuit and a night cap, and the old gentleman brought up the rear with his clothes and those belonging to his wife in his arms, being almost completely hid in a mass of female attire not generally exposed to public gaze. It is needless to say that the genuine innocence of the old couple in the whole matter was so apparent that it protected them from any rude comment, but after they had piped down it kept the passengers in a smiling mood the balance of the trip.—*Cincinnati Inquirer*.

A Dog Case.

A hopping mad man at the Union depot wanted to see the president, secretary, superintendent and treasurer all at once, and it would have done him a heap of good could he have got within striking distance of even a \$20,000 stockholder in any of the railroads entering Detroit. To the several queries as to what was on his mind he finally replied: "I was coming in from Dearborn this morning, a walking on the track. My dog Bombo was with me. I've had that dog five years, and have been offered \$20 for him. He was a little green about railroads, but on everything else he was as sharp as a razor. We had got down about a mile this side of the village when I saw a train coming."

"And stepped aside?"

"Of course I did. I own 160 acres of land and am a high-way commissioner, but I ain't fool 'nuff to think I'm bigger'n a railroad train."

"But the dog?"

"He stopped too. I reckon it was the first time he ever saw a train, but he'd have bin all right if the engineer hadn't begun to toot. The minit he heard that tootin' Bombo began to bristle, and while the train was 500 feet away he started down the track to meet it."

"Then—?"

"Wall," said the man as he mopped his forehead, "it was a little too much for him. An engine and five cars ought to get away with a dog any day in the year. He riz about 20 feet high, I reckon, took a slant to the left, and when he come down he broke the top off a small tree."

"Well?"

"I motioned for the engineer to stop the train as soon as the dog started. He could have done it, but wouldn't. Indeed, when the train went past me he leaned out and laffed—yes, sir, laffed in my face."

"And you want damages?"

"I do! I want the worth of that dog and \$500 for the shock to my nervous system."

"Have you any proofs?"

"I should smile! Even when I'm all broke up I don't try to put the right boot on the left foot; see that!"

And he drew from his pocket a hind leg, two paws, an ear and a piece of the lost canine's tail and spread them on the bench. There was an expressive silence in the crowd and then the highway commissioner called out:

"P-roofs! P-roofs! If them ain't p-roofs who be they? Gentlemen, I never had a lawsuit nor struck a man in my life, but if I don't take home a wad of greenbacks to settle this case the Michigan Central road will want a hull new board of officers to morrow!"—*Detroit Free Press*.

Forty-seven Years on a Locomotive.

James Eckler of this city, the locomotive engineer who, by continuous service, has earned the distinction of being the oldest follower of his profession in the United States, is now enjoying the elegant leisure to which his extended career entitles him. He threw the throttle of his engine open for the last time on the 31st ult. His retirement is permanent. Mr. Eckler is a youth for his years. His smooth face, devoid of beard or other bursite growth, shows few signs of advancing years. He himself avows that in body and mind he is still as sound as he was at middle life. It was the impairment of his eyesight that finally compelled the surrender of his task, a necessity he regrets with some feeling. His post at the throttle has been uninterrupted for nearly 50 years. During that period he has driven engines without number and carried millions of passengers along the periods rails. But he never lost a life, broke a man or received a scratch. He was certainly born under a lucky star. His first charge was running an engine on the Camden & Amboy in 1836. When the Rensselaer & Saratoga was only an experiment Mr. Eckler took a position upon its line and remained there until 1840. The New York Central then asked for his services. He accepted the tender and continued in the service until 1861. His first charge on the Central was to run an engine to the head of the incline plane, which brought the cars into the city by way of the old poorhouse, over what is now the lower part of the city, the hacks then passing over the spot now occupied by the horse railway ways stable. The cars were brought down the plane by the aid of stationary power to the depot, which stood on the site of the Taylor brewery. They were hauled up in the same manner. Mr. Eckler, recalling that line to a *Journal* reporter, said: "Railroading in those days was not what it is now. I have witnessed the development of the system to the present proportions, and had more than my share of the experience. I can recall when I used to pull the cars up and down the plane as if it was yesterday. The old machine was the 'Schenectady.' It was very small; in fact all the engines in those days were little fellows beside the moguls of the present day. In the fall of 1813 I came through the streets in the city, behind me the first train ever drawn by an engine through the streets of Albany. My engine was named the 'Albany.' The roadbed was the one now used by the New York Central. In 1861 I ran military trains for the Government on all the roads in Alabama, Kentucky and Tennessee. I remained until the close of the war, and during all my service I never had anything happen. I ran as reckless there as I would here on the Central. I seemed to have been born lucky, and was never afraid that anything would happen. If a train was fired upon or thrown down an embankment, it was to be either a train ahead or just behind me. I have seen trains come in with the engineer dead in the cab riddled with bullets, but I never had a shot fired at me or at my engine. At the last battle of the war, which occurred at Nashville, I ran the train with supplies and reinforcements to the city. It was after Hood had been driven out of Atlanta by Sherman, who struck across the country for Pulaski. While Hood was skirmishing all along the Alabama & Tennessee Railroad, and near Nashville, driving the Union forces into that city, my relief train rushed into the city without a scratch. During my whole service I never touched a drop of liquor or beer, except about seven years ago, when the physician recommended liquor for medicine."

"Good record, eh?"

"Yes, I think I may say I have got as good a record as any engineer in the country. It is said by those who know that it cannot be beaten as long as continued service is concerned. I am known all over the country by reputation, and whenever I go anywhere engineers will say: 'You need not tell us who you are; we know all about you and were advised of your coming.' The locomotives I've run? They would be difficult to number. I changed so often that I do not even know how many. Up to the time of going to war I ran nothing but passenger trains; since returning I have run both freight and passenger."

Since Mr. Eckler returned from the war he has served the Central. For a few years past he has been switching in the city yard. Mr. Eckler is 72 years of age. He has justly won his release from active life, and is content with the honor of such a record as he has made.—*Albany (N. Y.) Journal*.

Prizes for Excellence of Track.

At the annual inspection of the Pennsylvania Railroad recently the General Manager's prize of \$100 for the Supervisor having the most perfect section of track between New York and Pittsburgh was (for the second time) awarded to Mr. Victor Wierman, Supervisor of Section B of the New York Division. Section B extends from Stelton, N. J., to Trenton, and over it passes all of the heavy traffic between New York and Philadelphia.

At the annual inspection of the New York Central Hudson River Road the prize for the best section was awarded to Road-Master Bennett, whose section extends from Rochester to Syracuse on the Auburn road, and from Rochester to Lyons on the direct road. The second prize was awarded to Road-Master Alonzo Weston, whose section extends from Rochester to Suspension Bridge.

The Tehuantepec Ship Railroad.

The following extracts from an interesting letter from one of the leading engineers of the Eads ship railroad have been furnished to the *Panama Star and Herald*:

"Since I wrote you I have been all over the isthmus on foot and on horseback, in steam launches or in canoes. I have found that all previous surveys seemed to take it for granted there was but one route across on the Atlantic side, and one expedition after the other had blindly followed following the leader over it. This route had wagon and mule roads along it the whole way. Finding indications of better country for our purposes, but in the woods, I went into it, leaving the wagon and mule roads, and by dint of some good hard work have succeeded in procuring a line over the roughest section of the isthmus that had most agreeably surprised our people in New York, as it was entirely unexpected. The first transit line ever run across the isthmus was finished by us on Aug. 16 last—distance being 150 miles. You can form an idea of the difficulty of securing a good line when one is not permitted to use any curves of less than 15 miles radius. I was in Suchitan and Tehuantepec the middle of last month and came over here to Minatitlan by order of my chief for consultation. He has since left for New York. I am now here in charge. Everything indicates that this enterprise is going ahead swimmingly."

ANNUAL REPORTS.

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Kan. City, Ft. Scott & Gulf.....	707	Virginia Midland.....	100
Kentucky Central.....	214	Wabash, St. Louis & Pac.	167,180
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Manhattan.

This company operates under lease the Metropolitan Elevated and the New York Elevated roads in New York city, 32.34 miles of elevated railroad in all. The road is all double track. The following statement of earnings for the year ending Sept. 30 was presented at the annual meeting this week:

1882-83.	1881-82.	Inc. or Dec.	P.c.
Earnings.....	\$6,386,506	\$5,973,633	I. \$412,873 6.3
Expenses.....	3,756,828	3,608,370	I. 88,458 2.4
Net earnings.....	\$2,629,678	\$2,305,263	I. \$324,415 14.1
Gross earn. per mile.....	107,480	184,713	I. 12,767 6.9
Net earn. per mile.....	81,313	71,282	I. 10,031 14.1
Per cent. of exps.	58.82	61.41	D. 2.59 14.1

The statement as published does not give the disposition made of the net earnings of the company.

The earnings of the several lines were as follows:

Earnings.	Expenses.	Net earn.	P. c.
\$529,538	\$513,634	\$15,904	97.0
3,188,433	1,605,063	1,583,370	50.3
2,072,871	1,246,012	826,859	60.1
593,684	392,119	203,545	55.8
Total.....	\$6,386,506	\$3,756,828	\$2,629,678 58.8

On the Second Avenue line the average train was 3.42 cars and 93 passengers; on the Third Avenue, 3.89 cars and 150 passengers; on the Sixth Avenue, 3.81 cars and 113 passengers, and on the Ninth Avenue, 2.80 cars and 78 passengers.

The net earnings per train run and per train-mile were as follows:

Per train.	Per train mile.
\$0.10	\$0.02
5.13	0.64
3.34	0.41
1.74	0.35

The difference in these earnings is very marked. The Second and Sixth Avenue lines belong to the Metropolitan Elevated Co., and the Third and Ninth Avenue lines to the New York Elevated.

Boston, Revere Beach & Lynn.

This company owns a line of three feet gauge from East Boston, Mass., to Lynn, 8.8 miles; also a ferry between Boston and East Boston. The road is used chiefly for passenger traffic. The report is for the year ending Sept. 30. The stock is \$585,800, and the funded debt \$350,000.

The earnings for the year were as follows:

1882-83.	1881-82.	Increase.	P. c.
Earnings.....	\$187,493	\$11,774	\$15,789 9.2
Expenses.....	128,094	117,050	11,035 9.5
Net earnings.....	\$59,399	\$54,645	\$4,754 8.7
Gross earnings per mile.....	21,316	19,512	1,794 9.2
Net " "	6,750	6,210	538 8.7
Per cent. of expenses....	68.32	68.20	0.12

The income account for the year was as follows:

Net earnings for the year.....	\$59,399
Interest, etc.	\$32,949.17
Dividends, 6 per cent.	29,321.00

Deficit for the year..... \$2,870.00

This deficit was made up from the surplus on hand, and no reduction was made in the dividends. Last summer was a very bad season for beach travel, owing to the cool weather,

and the war of cheap fares with the Eastern road also made a large decrease in receipts. The road nevertheless increased its earnings and net earnings, but the increase in interest payments absorbed the gain thus made.

Eastern.

This company has made the following statement of its earnings and income account for the fiscal year ending Sept. 30, in advance of the publication of the full report for the year.

The earnings for the year were as follows:

1882-83.	1881-82.	Inc. or Dec.	P. c.
Passenger.....	\$1,882,826	\$1,766,258	I. \$155,568 3.1
Freight.....	1,454,878	1,303,096	I. 61,182 4.4
Mail, express, etc.	140,563	140,164	I. 396 0.3
Rents and miscellaneous.....	167,230	102,960	I. 64,279 63.3

Total..... \$3,032,193 I. 2,841,907 6.7

Passenger-miles..... 104,989,238 I. 100,490,413 1. 4,528,825 4.5

Tons freight carried..... 1,626,509 I. 1,532,816 1. 73,893 4.8

Ton-miles..... 57,915,789 I. 58,349,479 D. 433,690 0.8

Ay. train-load: Passengers, number..... 67 I. 67 0.8

Freight, tons..... 63 I. 66 D. 3 4.5

cent.; \$4,159,000 at 6 per cent.; \$1,944,000 at 5 per cent., and \$200,000 at 4½ per cent., the total interest charge being \$536,618 yearly. They are all plain bonds.

The traffic for the year was as follows:

Train miles:	1882-83.	1881-82.	Inc. or Dec.	P. c.
Passenger.....	1,573,254	1,493,221	I. 82,033	5.5
Freight.....	917,602	887,849	I. 27,735	3.3
Service.....	539,837	490,837	I. 78,500	17.0
Total.....	3,032,193	2,841,907	I. 190,286	6.7



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EDITORIAL ANNOUNCEMENTS.

Passes.—All persons connected with this paper are forbidden to ask for passes under any circumstances, and we will be thankful to have any act of the kind reported to this office.

Addresses.—Business letters should be addressed and drafts made payable to THE RAILROAD GAZETTE. Communications for the attention of the Editors should be addressed EDITOR RAILROAD GAZETTE.

Contributions.—Subscribers and others will materially assist us in making our news accurate and complete if they will send us early information of events which take place under their observation, such as changes in railroad officers, organizations and changes of companies, the letting, progress and completion of contracts for new works or important improvements of old ones, experiments in the construction of roads and machinery and in their management, particulars as to the business of railroads, and suggestions as to its improvement. Discussions of subjects pertaining to ALL DEPARTMENTS of railroad business by men practically acquainted with them are especially desired. Officers will oblige us by forwarding early copies of notices of meetings, elections, appointments, and especially annual reports, some notice of all of which will be published.

Advertisements.—We wish it distinctly understood that we will entertain no proposition to publish anything in this journal for pay, EXCEPT IN THE ADVERTISING COLUMNS. We give in our editorial columns our own opinions, and those only, and in our news columns present only such matter as we consider interesting and important to our readers. Those who wish to recommend their inventions, machinery, supplies, financial schemes, etc., to our readers can do so fully in our advertising columns, but it is useless to ask us to recommend them editorially, either for money or in consideration of advertising patronage.

"TIME FOR THE CONTINENT."

In No. 1 of Vol. I. of the *Railroad Gazette*, issued April 2, 1870, is an editorial article under this title, strongly urging the adoption of a uniform time standard for the railroads of the United States. Next Sunday what was then proposed will be substantially effected. Not only will the railroads of the country run their trains by Greenwich time, but in all probability in a short time that standard, adopted by the railroad managers chiefly or largely to avoid complications and mistakes in their own peculiar business, in which time is of vital importance, will become the standard for all purposes throughout this country and Canada, and with the close relations our railroads will have with Mexico, probably before long that in country also, when our demand of 13 years ago for "time for the continent" will have been substantially answered.

We have followed from time to time the steps taken to secure this great change, since first proposed directly to the railroad managers by Mr. W. F. Allen, Secretary of the time conventions and editor of the *Official Railway Guide*. Other proposals, made by Professor Langley, of Pittsburgh, and Professor Dowd, of Syracuse, about the time that our own suggestion was made, and later by Mr. Sanford Fleming, of Canada, like our own had apparently no effect in causing action to be taken, because, doubtless, there was no one behind them to give his time to the subject, to study critically existing practices and the effect of a change, to search out the standard and the system which would cause the least violent changes, and interfere least with people's habits, especially large bodies of people; to point out just what needed to be done by every railroad in order to adopt the system; in a word, to do the thinking and planning on the subject for the hundreds of railroad officials who would have to act upon it, but whose time is so taken up with important duties that must be performed that they are almost sure not to take a step (not absolutely necessary) which requires for all of them at once a considerable study and united action.

To propose a uniform time was easy; to propose a practical system, like that with hour intervals between standards, did not require genius; to adapt one so that existing railroad systems might, for the most part, fall naturally under the different standards, must have taken much study and good judgment; to find a nomenclature which should not cause prejudice in communities as jealous of each other as some of ours are, demanded tact; to translate the scores of different time-languages existing into the new common speech, required industry. Seeing that all these various things needed to be done to make it possible to secure the favorable action of any considerable number of the managing officers who would have to decide on the

adoption of new time standards was, however, what more than anything else made the effort successful. To get a thing of this kind done is usually a work of such vast difficulty that the accomplishment deserves credit much more than the design.

It seems an easy thing for a number of gentlemen who come together to agree upon the times of trains that connect with each other to decide to adopt a new time standard. But to get railroad managers to agree upon any kind of uniform action experience has proved to be a work of extraordinary difficulty. In these matters, it must be remembered, the majority does not rule; in fact, it is generally the minority that rules—to the extent of preventing uniformity. When the most intelligent and influential men and the greater number are convinced, there remain the stupid, unreasonable, obstinate, thoughtless, who need to be convinced also. Further, matters are pressing on the attention of railroad managers all the time which involve the making or saving of great sums of money. It is so with traffic agreements, and with many other things connected with the construction of rolling stock and the operation of roads. United action, if it can only be secured, in some of these matters means a great saving in money. With so many unsolved problems involving large sums, it is naturally extremely difficult to get the attention of the leading officers when no money is involved, or the economy seems indefinite and remote, and it is usually impossible to get them to give any considerable time to such matters. This is all very fine, they may say, but my ox is in a pit, and I must go to help him out: and there are oxen in pits all the time. Standard time is well, but we are killing a man a week at grade highway crossings, and crippling employés by imperfections in car construction, and wasting ten thousand dollars worth of coal a week, and likely to lose a million if we do not settle a difficulty with a competitor, and are threatened with legislation that would make us work without profit—another time for standard time.

So in this case especially it was necessary that some one should undertake to do all the work, so far as possible, and leave the railroad managers little more than the giving of the order.

Fortunately Mr. Allen appreciated this, and was sufficiently enthusiastic for his ideal to devote the time necessary to perfect his plan and prepare everything for its application. His success, which is likely to identify his name forever with a time standard affecting every person in the country, might gratify the ambition of any man, and shows what can be done by persistent effort and a careful adjustment of means to ends, even in securing the united action of the railroads. It is an example, too, that needs to be followed in other matters. Wherever united action is needed it is likely to be secured, if at all, by some one man giving himself to it, studying all sides of it, and all sides of the body of men on whose action its adoption depends. In the complexity of our social and corporate organizations we sometimes feel that no one person is of much account. But in this we deceive ourselves. Things do not get done of themselves now more than heretofore. The very efficiency of the organization is that it enables some individual to carry out his purposes more completely or extensively. It will next Monday enable Mr. Allen to realize his plans and ideas over scores of thousands of miles of railroad for the benefit of sixty millions of people. It will be at his bidding that the time ball will fall at noon of the 75th meridian next Monday in Boston, New York, Philadelphia and Washington alike, and that watches will be changed from Bangor to Los Angeles, and from Puget Sound to St. Augustine.

The first movement toward adopting the new standard as local time was made at Boston, and was particularly gratifying because in adopting the time of the 75th meridian that city changes its local time 16 minutes. The New York authorities have also taken the proper steps, but this only necessitates putting back the time-pieces 4 minutes. At Philadelphia the time is made 1 minute later; at Washington 8 minutes. It is reported that not all the Chicago roads have decided yet to make the change, which will make the time there (that of the 90th meridian) 9 minutes slower than at present. We believe that the Common Council there has taken up the subject, but has not yet passed the ordinance legalizing the change. There seems to be every disposition on the part of the public to adopt the new standard, however; the Washington Observatory will telegraph it, and the watchmakers, who are the keepers of the standards for the people, are ready to keep it. We should expect the greatest objection to be made to it in places where the change from local time will be greatest, as at Detroit and Columbus (28 minutes), Cincinnati (22), Savannah (24), etc. Where the places are junction points between

roads worked by two standards, and the standard is about half an hour from the local time, either standard may be adopted for local time. Port Huron may have its noon either at the noon of the 75th or at noon of the 90th meridian, the latter being the 1 o'clock of the former. At this season it would generally be more convenient to put the timepieces back, but the change is not for the winter, but for all time; and as the relations of most of our cities are much closer with the country west of them than with that east of them, general convenience will be promoted by taking the time of the lines to the West.

Thus Detroit, if it takes 90th meridian time (28 minutes slow), will have the time of all the stations of all the Michigan roads, which give it most of its business, and Savannah, which needs to set forward its watches but 24 minutes to get "Eastern" time, by doing so will put itself an hour ahead of the time of all Georgia and the country further west and northwest, from which it receives produce and to which it sells goods, chiefly. For this reason it will be better to take "Central" time, which is 36 minutes fast for it.

A question which has to be decided by every road adopting the new time is whether it shall simply change its time-pieces and not its time-tables, thus actually making a change in the time of running trains, or change its time-table also, so that the trains will run approximately as many minutes before or after mean noon as at present. The easy way is to change time-pieces only, but as different roads have to run some trains in connection, and the changes on one road will often be different in amount from those on its connection, this in many cases is not practicable. Thus a train at present arrives at a junction point at 5:05 by Columbus time, and connects with a train leaving the junction at 5:00 o'clock by Indianapolis time, which is 15 minutes slower, leaving 10 minutes for transfer of passengers. When both run on Central time, one must change its schedule, or the arrival at the junction point will be after the connecting train has left. It is in this changing of schedules that the chief difficulty of introducing the new system consists. Mr. Allen has compiled complete "translation tables" for every railroad time, which reduce the labor of preparing new schedules to a minimum, but of course this still leaves something for the railroads to do. It is to be hoped that any such inconveniences will not be permitted to delay the introduction of the new standards more than is necessary, but it is not likely that so widespread a change can be made without some friction and awkwardness, only to be overcome by persistence and labor.

CHICAGO RAIL SHIPMENTS EASTWARD.

The shipments of all through freight eastward from Chicago by the eight railroads during the month of October for five successive years have been:

	1879.	1880.	1881.	1882.	1883.
Tons...	183,976	179,466	258,674	152,871	195,344

Thus the shipments this year are no less than 42,473 tons (27 per cent.) more than last year, when rates were the same, 24 per cent. less than in 1881, when rates were about half as high, 84 per cent. more than in 1880, when rates were a fifth higher, and but 1,368 tons (0.7 per cent.) more than in 1879, when the rate was 30 cents for the first 12 days of the month and 35 for the other 19 days, against 25 throughout the month this year. The October shipments in 1879 were in every way extraordinary—nearly 60,000 tons more than in the September preceding, while from September to October there was an increase of 28,002 tons in 1880, a decrease of 6,740 in 1881, a decrease of 363 in 1882, and an increase of 3,367 tons this year. In 1879, also, there was a great decrease from October to November, while in every other year except 1881 there was a great increase in November.

The shipments this year were, then, positively large for the season, and October is usually a month of large shipments—larger than in any other month except November during the season of lake navigation. That not all the roads which carry this traffic have felt it to be a month of heavy traffic is due to the fact that there are two additional competitors for it this year. If we deduct the 19 per cent. to which these new roads were entitled this year, we have left 158,229 for the six roads which have had the whole in previous years. This we see is a little more than they had last year, but less than in any previous year.

The earnings from this traffic, on the assumption that all of it went through to New York, have been:

1879.	1880.	1881.	1882.	1883.
\$1,288,899	\$1,078,793	\$776,022	\$764,355	\$976,720

Subtracting 19 per cent. for the new roads, we have \$791,143 last month for the six roads which had the whole of the earnings in the previous years. This is a little more than last year or the year before, but

much less than in 1879 and 1880, when the fall traffic was extraordinarily remunerative.

For each of the ten months ending with October the Chicago shipments have been for five years, in tons:

	1879.	1880.	1881.	1882.	1883.
January....	192,512	163,378	263,872	321,166	257,073
February....	198,541	169,541	204,331	225,816	223,212
March.....	258,458	318,083	212,021	179,145	287,495
Three mos.	649,511	648,002	680,224	726,127	767,780
April.....	298,042	186,543	275,417	138,475	147,129
May.....	280,355	125,157	171,432	115,322	141,011
June.....	230,234	223,977	242,463	115,805	123,889
July.....	145,788	160,187	250,253	95,039	113,575
Four mos.	984,419	695,864	948,563	464,041	525,604
August....	162,263	169,314	269,608	138,241	165,168
September....	134,141	151,404	265,474	153,234	191,977
October....	103,976	179,436	258,674	152,871	195,344
Three mos.	490,380	500,244	784,696	444,346	552,489
Ten mos....	2,124,310	1,845,010	2,413,485	1,635,114	1,845,673
N.C. and Dec.....	347,428	464,630	475,832	494,446
Year.....	2,471,738	2,369,640	2,880,317	2,129,560

The first three months include the winter movement; the first seven the end of the last crop year, and the last three the beginning of the new crop year, affording the best indication of the course of business from the present crop year. For the first three months of the year the traffic was very heavy, for the next four very light, and for the last three the shipments have been heavier than in the corresponding period of any previous year except 1881, when by low rates the railroads secured the shipments which usually go by rail, but received less for carrying the larger amount than from the smaller amounts in most other years.

For these three months the shipments this year have been 22½ per cent. more than last year, 10½ per cent. more than in 1880 and 12½ per cent. more than in 1879, but 30 per cent. less than in 1881. As there are unusual amounts of grain, at least of small grain, unmarketed in the Northwest, it would appear that these first three months of the crop year should not have afforded an exceptionally large proportion of the year's shipments, and that, therefore, we may expect the shipments for several months hereafter to be larger than in previous years. This may not prevent fluctuations from month to month, and if foreign countries refrain from importing our grain through the winter, so that the heavy movement in it will be after lake navigation opens in the spring, the railroads may not get the benefit of a larger movement this crop year. But though exports have been very light so far, it is not probable that they will continue to be so until May, and any revival of them will be felt strongly in the shipments from Chicago. The large shipments of the last three months have been chiefly for domestic consumption.

For the entire ten months, ending with October, the shipments this year have been 210,759 tons (13 per cent.) more than last year, and almost the same as in 1880, which was a very profitable year, but 278,500 tons (13 per cent.) less than in 1879, when rates were badly demoralized throughout the first seven months of the ten, and 567,600 tons (23½ per cent.) less than in 1881, when rates were still more demoralized in the last four and a half months of the ten. Notwithstanding the very bad traffic of the four months ending with July, then, this year so far cannot be considered one of light traffic, though disappointing to those who have counted on a rapid growth of this business.

For the remaining two months of the year Chicago will do very well if it ships as much as last year, when the amount was larger than in any previous year—more even than when the roads were carrying at half price in 1881. Unless there is a revival of the foreign demand, we shall not expect the shipments in these months to be as large as last year. Then they were swelled materially by the marketing of new corn, which was very much needed in the East and abroad. This year there is no such dearth of this grain among consumers, and it will be unusually late before much of it is fit to ship, it having matured very late, and a very large share of it being soft and unfit to market at all. But this condition of corn, which will prevent early shipments of the grain, will be likely to promote early shipments of hogs and pork, as the grain, too soft to be marketed, can be saved only by feeding it. This will not make as much freight as the corn would have made, however.

From the last ten days of October the through rail shipments of freight from Chicago, by the complete report, were 62,974 tons, against 51,063 tons in the corresponding ten days of last year, the increase thus being 11,912 tons, or 23½ per cent. The percentage carried by each road in each year, and the percentage to which each is entitled this year by Mr. Fink's award, are as follows:

	1882. Award.	1883. Award.	1882. Award.	1883. Award.
Ch. & Grand Trunk....	9.2	11.0	16.6	18.6 19.4
Mich. Cen....	24.3	24.6	18.9	Pitts. 18.0 10.3 8.0
Lake Shore....	12.7	17.0	Balt. & Ohio. 8.3	8.3 7.0
Nick'l Plate....	9.1	8.0	Chic. & At-lantic.....	7.2 11.0

By this it appears that this year the Grand Trunk, the

Lake Shore, the Fort Wayne and the Chicago & Atlantic carried less than the proportions to which they were entitled, and the Lake Shore one-fourth less than its share; the Michigan Central nearly a third more, and the other three roads also more than their proportions. The three Vanderbilt roads together carried 46.4 per cent. of the whole, against the 43½ per cent. to which they are entitled. The two Pennsylvania roads carried 28.9 per cent. against the 27½ which is their share. The fluctuations in the percentages since July, including three of the four months that the two new roads have been in the pool, and the new award has effect, may be seen in the table below, which gives the percentage carried by each road in each week of that time:

	Grand Trunk....	Michigan Central....	St. L. & P....	Chicago & Atlantic....	N. Y., C. & St. L. & P.
Week to—					
Aug. 7....	12.5	15.3	15.9	22.5	11.9 8.6 8.0 5.3
" 14....	10.0	14.2	16.3	22.2	11.1 7.8 13.8 4.8
" 21....	11.8	13.7	15.8	20.5	13.9 6.3 13.8 4.2
" 28....	11.8	10.2	15.2	21.0	17.7 6.6 13.5 4.0
Sept. 7....	8.7	13.7	14.4	20.0	12.1 6.6 17.2 7.3
" 14....	10.0	12.8	14.9	21.7	9.0 6.3 14.7 10.6
" 21....	8.3	13.8	14.7	20.1	8.9 10.5 13.1 10.6
" 28....	7.5	16.1	16.4	22.6	6.1 7.6 13.8 10.1
Oct. 7....	10.4	16.3	12.8	23.1	6.3 7.1 13.7 10.3
" 14....	10.8	18.6	11.9	22.8	6.9 7.4 10.1 11.5
" 21....	10.0	21.4	13.4	22.3	5.2 7.6 9.4 10.7
" 28....	9.2	24.6	12.7	18.6	10.3 8.3 7.2 9.1

If we follow down these columns we shall see that the percentages of the Chicago & Grand Trunk have varied comparatively little since July, and were about as large in October, when traffic was heavy, as in August, when it was comparatively light. On the other hand the Michigan Central and Lake Shore percentages have varied greatly, the former's being very small when the total shipments were smallest, and becoming large when the shipments were largest, demonstrating at least that the road has capacity for a very large proportion of the business when it is largest. The course on the Lake Shore has been just the reverse, except that at no time can it be said to have had a large share of the traffic; but the moderate share which it had in August became a little smaller in September and very small last month. But if we follow its percentages and those of the Nickel Plate at the same time, we shall see that, generally speaking, the latter has increased as the former has decreased, and that the aggregate percentages of the two roads have fluctuated less than those of either alone, as the aggregates given below for successive weeks will show:

	Aug. 7.	Aug. 14.	Aug. 21.	Aug. 31.	Sept. 7.	Sept. 14.
21.2	21.1	20.0	19.2	21.7	25.5	
Sep. 21.	25.3	26.5	23.1	23.4	24.1	21.8

The smallest of these aggregate percentages (last week of August) was 7.2 less than the largest of them (last week of September); but the Nickel Plate's largest percentage (second week of October) was 7.5 greater than its smallest (last week of August), and the Lake Shore's largest 4.5 more than its smallest. The Nickel Plate, it is seen, like the Michigan Central, carried its largest percentage when traffic was largest, and so demonstrated its capacity. The 4.45 per cent. which it carried in August amounted to but 7,342 tons; the 10.3 per cent. in October amounted to 20,052 tons, the total shipments being 18 per cent. more in October than in August.

The Fort Wayne has fluctuated comparatively little—until the last week of October only between 20 and 23.1 per cent., in this last week falling to 18.6 per cent.; but on the other Pennsylvania road the fluctuations have been greater than on the Nickel Plate even, ranging from 5.2 in the third week of October to 17.7 in the last week of August. The largest of its percentages were before the traffic was heaviest, but it has had some large ones since. The larger part of its through shipments are chiefly by an Erie line. The latter's Chicago & Atlantic road has suffered fluctuations which followed the course, generally, of those of the Chicago, St. Louis & Pittsburgh, just described, but the decrease of late weeks has not been so great. The extreme percentages of the Chicago & Atlantic were 7.2 in the last week of October and 17.2 in the first week of September—the latter a week of heavy total shipments. But in August it carried 12.5 per cent. of the whole, amounting to 20,655 tons, in September to 14.6 per cent., or 28,121 tons; in October 9.8 per cent., amounting to 19,216 tons—less in October than in August, though the total traffic increased 18 per cent. meanwhile.

The Baltimore & Ohio fluctuations seem not particularly significant. Its percentages have varied little from month to month.

The significance of these fluctuations depends largely on the amount of the shipments at different times.

When traffic is light it is not easily diverted from one road to another, and especially not from an old road to a new one, without a reduction in rates, and for a road to make a large increase in its percentage for a considerable period at such a time is more likely to cause suspicion than if it gets a much larger amount when the other roads are crowded. It is probably easier for the Nickel Plate to get 10 per cent. of the total large shipments now when they are at the rate of nearly 200,000 tons per month, than it was for it to get 5 per cent. in July, when they were but 118,575 tons—easier to get 20,000 tons when the other roads are busy than to get 5,700 when half their cars are idle.

For the last month, which is the first since the awards of percentages have been known by the companies, the percentages actually carried compare as follows with those awarded:

	Carried.	Award.	Carried.	Award.
Ch. & Grand Trunk....	10.0	11	Ch. St. L. & P.	21.4 19½
Mich. Cen....	20.6	18½	Pitts.	7.5 8
Lake Shore....	12.7	17	Balt. & Ohio....	7.7 7
Nickel Plate....	10.3	8	Chic. & Atlantic....	9.8 11

The only great difference between the award and the amount actually carried in October is in the case of the Lake Shore, which carried a quarter less than its share, but while it was short 4.3, the other two Vanderbilt roads were over 4.15, and the three together carried 43.6 of the 43.75 per cent. awarded them. If the several roads had started even, the proportions carried in October would have been as near the awards as could be expected in any one month, without transfers.

The shipments made in the last ten days of October were at the rate of 44,082 tons per week, which is just about the average for October and September, during which the weekly shipments have fluctuated comparatively little.

The Grand Trunk and the West Shore.

It is vaguely reported that negotiations between the Grand Trunk and the New York, West Shore & Buffalo companies have resulted in the lease of the West Shore by the Grand Trunk for a long term of years, and there have even been statements as to the rental agreed upon. There have, doubtless, been some negotiations between the two companies for a connection, and the negotiations may possibly have been for a lease; but a lease cannot have been concluded, because the Grand Trunk board cannot take any such important step without the approval of the stockholders, at a meeting called for that purpose, and no such meeting has been called, not to say held, as yet. The present Grand Trunk board commands the confidence of the stockholders, and they will certainly receive favorably any propositions which it may make; but the board cannot substantially dictate what shall be done by the company in matters of this kind, as most of our American boards can; it owns but a small proportion of the stock, and the stockholders outside are numerous, and many of them influential and accustomed to considering for themselves matters as important as the lease of a road with 50 millions of bonds and 40 of stock. They have but recently begun to get dividends, and the largest amount the company has had available heretofore for dividends in any year has been but about \$1,875,000, while the funded debt of the West Shore will require \$2,500,000, and that of its New York terminus a considerable amount in addition. Thus the lease of the West Shore would be a very great undertaking for the Grand Trunk, and we may be sure that it will not be made without an elaborate presentation to its stockholders of what is to be gained by the lease. We do not believe that they purpose making one.

Probably there is no other single company, with the exception of the New York Central, to which the West Shore will be worth as much. The Grand Trunk has one of the shortest lines between the Niagara River and Chicago, but it has comparatively little New York traffic. It controls about 1,800 miles of railroad west of the Niagara River, which must necessarily make many interchanges with New York railroads. So far as the traffic which originates on these roads is concerned, however, they have a sufficient outlet over any of the roads now in operation between Buffalo or Suspension Bridge and New York; but the command of this traffic would enable it to give a considerable business at once to a road under its own control east of the Niagara River. What the Grand Trunk feels, however, is the lack of a connection which will enable it to do a full share of the through business between Chicago and Milwaukee on the west and New York state and city on the east. It would not seem necessary for it to lease a road for this purpose, as the Lackawanna and the West Shore need western connections much more than the Grand Trunk needs an eastern one, or rather a New York one, for it has always had good connections with Boston and New England.

And this points to a complication which the lease of

the West Shore by the Grand Trunk would cause. The Grand Trunk has for many years cultivated a through traffic to Boston and New England by way of Montreal and the Central Vermont, as well as by its own line to Portland. With the West Shore road it would have a direct line to Albany, on the very border of New England, and a connection by the Hoosac Tunnel route directly to Boston, very much shorter than the one for which it and the Central Vermont have long and laboriously built up a fine traffic. No longer ago than Oct. 25 Sir Henry Tyler, President of the Grand Trunk, at the half-yearly meeting of the company in London, said of this connection: "We have worked for very many years with the Vermont Central. It is a line of some 600 miles in length, and it would be a very disastrous thing were it to fall into hostile hands. We exchange with this Vermont Central a traffic of no less than £400,000 per year, and it is really of vital importance for connection with New England. *We have acquired a certain property in it with a view to controlling it.*" Thus the West Shore would be chiefly valuable to the Grand Trunk as a New York connection, and cannot be anything like as important to it as a New England connection as the New York Central is to the Lake Shore and the Michigan Central.

But although the Grand Trunk is the largest single system west of Buffalo that could be allied with the West Shore, still it occupies comparatively a small part of the field, and that not the one which affords most traffic for New York. Its lines are mostly in Canada, and the relations of Canada with New York are not nearly so intimate as those of Michigan and Ohio. Canada has a tariff intended to prevent or restrict imports from the United States, as we have one which restricts our imports from Canada. Purposefully it is made more advantageous for Canadian merchants to buy their stocks of European goods at Montreal than at New York, just as our merchants can buy such goods better in New York or Boston than in Montreal. Thus a population of two millions in Canada quite near New York does not exchange nearly as much traffic with New York as an equal population in Ohio or Illinois. The Grand Trunk has, however, about 600 miles of railroad in Michigan.

Again, the Grand Trunk system is too far north to have the most favorable connections with the rich and populous country south of Michigan and the lakes. It can give an excellent route to Chicago, but much less favorable ones, or none at all, to Cleveland, Toledo, Columbus, Cincinnati, Indianapolis, Louisville, St. Louis, etc. Its connection with the Wabash (at Detroit) is, however, nearly as favorable as that which the Canada Southern and the Lake Shore make at Toledo, and will enable it to compete for a share of the traffic of that great system.

A good New York connection would probably enable the Grand Trunk to secure a larger share of the traffic that is shipped from Chicago. It is not easy to see why the Erie should not have afforded it such a connection before it had its own Chicago & Atlantic, or why the Lackawanna should not afford it now, but it seems not to have commanded that share of the New York business which it thought it ought to have. The 11 per cent. which it now takes of the Chicago shipments would not make a great figure on a trunk line like the West Shore, and Milwaukee is the only other place where it commands a considerable through traffic.

By the way, the only mention of the West Shore made by Sir Henry Tyler in the speech above referred to was as follows:

"Other available connections with New York are open or opening to us. We have already the Delaware, Lackawanna & Western, with which we exchange a considerable amount of traffic; and there is a line which will be shorter and over better gradients, and be superior in all respects to the New York Central, between Buffalo and New York, with which, I have no doubt, we shall have very friendly relations, and with which we are now making arrangements to exchange traffic. It will be opened, it is expected, by the beginning of next year."

"We have thus built up a solid and substantial and powerful system, which we desire now rather to consolidate than extend. (Hear, hear.) I won't say we shall not extend it, because there are constant temptations to extend and constant necessities for extension in that country."

The juxtaposition of this account of the connection soon to be afforded by the West Shore road and the declaration that the board now wishes to consolidate rather than extend its system was probably accidental. But the whole would indicate that at the time of making the speech Sir Henry Tyler did not expect to have any such close relations with the West Shore as a lease would make.

Erie Earnings and Expenses in August.

The earnings and expenses of the New York, Lake Erie & Western Railroad are now reported for the month of August, in the same form as heretofore, that is, including only 68 per cent. of the earnings of the leased New York, Pennsylvania & Ohio earnings in the gross earnings. This month shows the effect of the exceptionally large proportion of

the Western shipments which the Erie secured in August and September (in one week more than half of the whole Chicago shipments) in a very remarkable way, and it shows too a much larger increase of net earnings than we should have expected in view of the rebates said to have been made on the rates. The net earnings in August (less the rental of the New York, Pennsylvania & Ohio this year) have been for the six years since the reorganization:

	1878.	1879.	1880.	1881.	1882.	1883.
\$569,803	\$591,237	\$649,187	\$677,371	\$748,076	\$1,100,065	

With the large through shipments thrown over the New York, Pennsylvania and Ohio this year in August, it is probable that there may have been some profit on the lease that month, but whether this was so or not, the figures represent the income of the Erie which this year, as previously, was available for other purposes than the rental of that road. This year we see the amount is no less than \$351,988, or 47 per cent. more than last year, though the earnings last year were much larger than in any previous August, and among the largest the road ever made in a single month.

The aggregate net earnings of the two roads last year in August were \$812,503, and the gross earnings of the Erie, plus 68 per cent. of the gross earnings of the New York, Pennsylvania & Ohio, the aggregate working expenses of the two roads, and the difference between these, which corresponds with what the Erie now reports as net earnings, have been for six years:

Year.	Receipts.	Expenses.	Net.
1878.....	\$1,702,597	\$1,145,214	\$557,383
1879.....	1,732,670	1,172,129	560,541
1880.....	1,939,009	1,272,563	657,446
1881.....	2,057,411	1,415,915	671,496
1882.....	2,202,477	1,309,730	802,747
1883.....	2,580,956	1,480,891	1,100,065

The last column shows what the Erie's net receipts after paying rental would have been had the present lease of the New York, Pennsylvania & Ohio been in force. There would have been a loss of about \$55,000 on the lease last year, trifling gains in each of the two previous years and small losses in the other years. Thus in two of the years the figures under "net" are larger, but in the others smaller than the sum of the net earnings of the two roads.

It appears that the considerable increase over last year (\$378,479) in the "receipts" was made with an increase of only \$81,161 in working expenses, and that the latter were but \$65,000 more than in 1881. In view of the large addition to the traffic that there must have been to make the large increase in gross earnings, this is a very small increase in expenses.

August was a favorable month to the Pennsylvania, but its gain over last year then was but \$104,000 (2½ per cent.), while the Erie's was 17 per cent. No report has been made for the month by the New York Central, but it is understood that it earned less than than the last year (when August was a very good month). The Baltimore & Ohio reported an increase in August, and the Grand Trunk one of 5½ per cent. The Erie's gain was thus exceptional.

For six successive years the Erie's net earnings (with loss or profit on the New York, Pennsylvania & Ohio lease this year) for the eleven months ending with August have been:

1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.
\$4,528,420	\$4,205,222	\$6,291,065	\$6,877,683	\$6,076,400	\$6,320,251

This year they are \$243,851 (4 per cent.) more than last year, nearly the same as in 1880, \$557,443 (8 per cent.) less than in 1880, and 40 and 50 per cent. more than in 1878 and 1879. At the end of July the net earnings this year were \$108,000 less than last year, and it is the enormous gain of 47 per cent. in August that has transferred the decrease into the increase. Probably there was a further increase in September. The mileage of freight trains was about 25 per cent. greater than last year, and the road carried then, as in August, an exceptionally large proportion of the east-bound freight.

The working expenses of the Erie for the eleven months and the New York, Pennsylvania & Ohio for the four months from May to August inclusive, have been:

1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.
\$1,777,429	\$1,411,063	\$11,706,943	\$13,357,281	\$13,249,641	\$13,803,660

The expenses this year are thus \$625,219 (4.7 per cent.) more than last year, and 3.8 per cent. more than in 1881.

The gross earnings of the Erie alone for the eleven months for the five years preceding this have been:

1877-78.	1878-79.	1879-80.	1880-81.	1881-82.
\$1,436,707	\$14,449,420	\$16,906,691	\$18,981,406	\$18,095,550

This year with 68 per cent. of the gross earnings of the New York, Pennsylvania & Ohio for four months the Erie's gross earnings have been \$20,189,112. Last year the leased lines' gross earnings for these months were \$1,924,181, 68 per cent. of which is \$1,308,445. This lacks \$785,107 of equaling the increase in receipts reported this year. Up to the time of the lease (May 1), the Erie had made a gain of \$469,493 (4.3 per cent.) in gross earnings. In the four months since the sum of its gross earnings and 68 per cent. of those of the New York, Pennsylvania and Ohio have been:

1883.	1882.	Increase.	P.C.
Receipts.....	\$8,805,947	\$8,490,332	\$315,615

This is by no means a large gain, but its smallness only emphasizes the fact that, in the last month of the four, there was an increase of \$378,479, or 17 per cent.

The gross earnings of the Erie in September, the remaining month of the fiscal year, were \$1,830,215 last year which is the largest amount the Erie proper ever had made in a month, except in October, 1880. As we have said, in view of the exceptionally heavy freight traffic over the road this year in September, a considerable increase may be expected—possibly as large as in August; but these gains are not likely to continue. They will serve, however, to

make the report for the fiscal year (ending with September) show an increase, while at the end of July they seemed likely to show a decrease. The figures for the year we shall probably have by the end of this month.

Separating Second-Class from First-Class Passengers.

Second-class tickets are sold over through routes much more than first-class passengers suppose, or than seems practicable where no second-class cars are run. The purchasers are nearly all men, and they are usually put into the smoking car, and excluded from through cars, ladies' cars and of course from parlor and sleeping cars. But if the ticket-holder objects to smoke, the conductor usually assigns him to a seat in an ordinary first-class car, and so he travels with substantially the same accommodations as the man who has a first-class ticket. This is because it is cheaper to carry the few second-class passengers in first-class cars than to provide separate accommodations for them.

Of course these passengers have no fault to find with this practice, but on those routes where the number of second-class passengers is considerable the first-class passengers sometimes object. They say that one of the advantages which they should secure by the higher price they pay is separation from the second-class passengers, who are not always clean, and sometimes bring a decidedly second-class atmosphere into a first-class coach. A lady has recently complained that on the Northern Pacific, which sometimes runs a second-class car, when the other cars had room enough, by reason of passengers leaving at way stations, the second-class car was taken off and the passengers transferred to the first-class car, and she says: "When lady has paid for protection against rough, unclean men ought she not to have it?"

But the exclusion of second-class passengers from first-class cars does not necessarily exclude rough, unclean men. If they buy first-class tickets they must be admitted into first-class cars, unless so offensive in appearance and manner that the conductor is legally justified in excluding them—a very delicate matter for a conductor to decide, and in the case of the Montana cowboy one which he would not always be safe in deciding against the ticket holder.

Nevertheless it is true that where there is a considerable difference in the price of tickets, most of the "rough, unclean" persons will buy the cheaper tickets, and that there will be comparatively few, if any, of the first-class passengers who will be nuisances to their fellow-passengers. Unfortunately, the reverse is not true. There will be many neat and orderly persons who for economy's sake buy second-class tickets, and who will suffer from the presence of the rough and unclean. Their necessities, it is true, compel them to suffer elsewhere than on railroad trains, but it is well to remember that if we pay to keep the objectionable passenger, out of our car, by the same payment we concentrate them in another car where probably there may be many gentle women and children, as well as cleanly, orderly men, who suffer from the bad odors and rough manners which we turn upon them when we turn them away from ourselves.

The whole subject of classification of passengers is full of difficulty. As things now are, and especially as fares now are, there are few lines in this country on which it is not cheaper to carry all passengers in first-class cars than to provide a distinction by a separate class of car. But there are indications that the class which supplies second-class passengers is growing fast, and that if the difference between first and second-class fares was as great here as abroad—the second-class one-fourth or more less—there would be immediately a very large second-class travel, especially in manufacturing communities and in the South, where nearly all the negroes would travel second-class. If the rates would sort the passengers as they do in most other countries, this would make first-class travel decidedly more pleasant. But the complication consequent on the necessity of having two kinds of cars in every train will considerably increase cost, and unless the introduction of the second class at low rates should very largely increase travel, the increase in expenses due to the complication would probably amount to more than the increase in earnings.

Further, this improvement of first-class travel would be accompanied by a reduction of the amount of it, and, doubtless, by a smaller average number of first-class passengers per car—in short, by an increase in the cost of carrying first-class passengers. All over Europe the indications are that the first-class does not pay; or at least that the profit per passenger mile is less on first-class than on most other passengers, even where the first-class is two or three times the average fare. It is desirable that all the accommodations be granted that the well-to-do class will pay for, but it is especially desirable that this class should be made to pay its full share of the profits of the railroads. We venture to say that it does not now do this in this country, where it pays less for parlor and sleeping-car accommodations, considering the additional car space required, than the ordinary passenger pays for his accommodations; and in Europe it is doubtful if there is any profit on first-class passengers.

Record of New Railroad Construction.

This number of the *Railroad Gazette* contains information of the laying of track on new railroads as follows:

Chicago, Milwaukee & St. Paul.—The Southern Minnesota Division is extended from Forestburg, Dak., west to Woonsocket, 12 miles. The Hastings & Dakota Division is extended from Aberdeen, Dak., west to Ipswich, 28½ miles.

Chicago & Northwestern.—This company's Menominee

River line is extended from Stambaugh, Mich., west to Iron Falls, 4 miles.

Cincinnati, Van Wert & Michigan.—Extended from Shane's Crossing, O., south to Celina, 11 miles; also from Ansonia, O., north to Gilberton, 9 miles.

Cleveland, Youngstown & Pittsburgh.—Extended from Alliance, O., southward 23 miles.

Columbus & Eastern.—Track laid to a point twenty-three miles eastward from Hadley Junction, O., an extension of 12 miles.

Des Moines, Osceola & Southern.—Extended from Decatur, Ia., east to Leon, 5 miles. Gauge, 3 ft.

Detroit, Bay City & Alpena.—Track laid from Wells, Mich., east to Rifle River, 4 miles.

New York, West Shore & Buffalo.—Track has been extended over the gaps between Syracuse, N. Y., and Amboy, 4 miles, and between Clyde, N. Y., and the Cayuga County line, 10 miles.

Union Pacific.—This company's *Utah & Northern* line is extended from Deer Lodge, Mont., northward to Garrison, 11 miles. Gauge, 3 ft.

This is a total of $13\frac{1}{2}$ miles of new railroad, making 5,410 miles thus far this year. The total new track reported in our columns to the corresponding date for 12 years past has been as follows :

	Miles.	Miles.
1883.....	5,410	1877.....
1882.....	9,102	1876.....
1881.....	6,341	1875.....
1880.....	5,056	1874.....
1879.....	3,042	1873.....
1878.....	1,840	1872.....

The statements include *main track only*, no account being taken of second tracks or other additional tracks or sidings.

and to Oregon to and from the East. They will no longer go by San Francisco, and it would seem that there must be steamers to spare. Fortunately for this company everything that its steamers lose its railroad must gain. Whether a haul of 214 miles by rail will be as profitable to it as one of 800 miles by steamer we cannot say.

OCTOBER EARNINGS, as reported so far by 68 railroads, which worked 47,400 miles of road last year and 51,798 miles this year (an increase of $9\frac{1}{4}$ per cent.), were \$30,056,685 this year, against \$27,268,527 last, the increase being \$2,770,158, or $10\frac{1}{2}$ per cent. Some of these reports (but not important ones) are for only three weeks. As they stand they are at the rate of \$580 per mile this year and \$575 last year—an increase of 1 per cent. The change in earnings per mile is small, but it is on the right side.

The four roads northwest of St. Paul that report show in the aggregate an increase of 60 per cent. in mileage and of $33\frac{1}{2}$ per cent. in earnings, and a decrease in earnings per mile from \$621 to \$564. This was the first month that the Northern Pacific was open through. It earned with 2,365 miles of road \$1,324,000, which is \$560 per mile (against \$585 last year). These are very fair earnings, and if they can be maintained through the year will make a very fair income for the first year of the road. This and the other roads northwest of St. Paul are, however, what we have called "hibernating roads." Heretofore, at least, the Northern Pacific's earnings have been largest in October, and for five months after November have not averaged nearly so much. Thus in 1879 the earnings were \$295,000 in October and \$210,600 in November, while the aggregate in the three months following was but \$273,000. In 1881, \$570,700 was earned in October and \$475,600 in November, and in the three months following \$905,580. The difference may not be so marked now that the road is opened through, as there will be through traffic to carry at all seasons. The difference has not been quite so great on the Manitoba.

The 11 other roads west and northwest of Chicago that report have an increase of $7\frac{1}{4}$ per cent. in mileage and of 9 per cent. in earnings, and their average earnings per mile increased from \$602 to \$610. These roads have usually shown a decrease in earnings per mile; but the great additions made recently are now mostly more than a year old, and since this year's crops have begun to come forward they have been adding something to the earnings. Seven-eighths of the whole increase in earnings was by three roads, the Milwaukee & St. Paul with 5 per cent. more road had 12.4 per cent. more earnings; the Northwestern's increase was $9\frac{1}{2}$ per cent. in road and $7\frac{1}{4}$ in earnings; the St. Paul & Omaha gained 15 per cent. in mileage and 18 per cent. in earnings.

The roads southwest of St. Louis in the aggregate gained nearly 9 per cent. in earnings with an addition of only 6.6 per cent. in road. The Missouri Pacific system (which for October reports only the aggregate earnings of the six roads of which it is composed, and not as heretofore the earnings of each of the six roads) gained nearly 9 per cent. in earnings with an increase of less than 6 per cent. in mileage. The St. Louis & San Francisco has but a trifling increase in earnings, though its mileage was 14 per cent. greater.

Of the roads north of the Ohio the Illinois Central gains $3\frac{1}{2}$ per cent., the Peoria, Decatur & Evansville $12\frac{1}{2}$, but both the Alton & Terre Haute roads, the Eastern Illinois and the Evansville & Terre Haute show considerable decreases— $21\frac{1}{2}$, 12, 18 and 14 per cent. The Wabash gained $7\frac{1}{2}$ per cent., with a small increase in mileage. The Lake Erie & Western has a trifling loss, the Cincinnati, Washington & Baltimore a small one. The Chicago & Grand Trunk, as heretofore, has a large increase (21 per cent.), and so has the Flint & Pere Marquette (29 per cent.).

As usual, but few Eastern roads have reported so early. The Grand Trunk gained 3.6 per cent., the New York & New England 13.2, the Long Island $3\frac{1}{2}$.

South of the Ohio and the Potomac most of the roads reporting show handsome gains, as heretofore this year the Southern Division of the Illinois Central gained 14 per cent., the Mobile & Ohio lost $6\frac{1}{2}$, the Louisville & Nashville gained $21\frac{1}{2}$, the East Tennessee $17\frac{1}{2}$, the Memphis & Charleston 20, the Richmond & Danville 0.7, the Chesapeake & Ohio $3\frac{1}{2}$ per cent.

Of the roads of the Far West, only two have reported. The Denver & Rio Grande, exclusive of its Utah line, gained $3\frac{1}{2}$ per cent. in earnings with $12\frac{1}{2}$ per cent. more road; the Central Pacific has an increase of $3\frac{1}{2}$ per cent.

THE GRAND TRUNK REPORT for the first half of 1883 shows an increase of 10 per cent. in gross earnings compared with the first half 1882, while the increase in working expenses was $6\frac{1}{2}$ per cent., resulting in an increase of no less than 20 per cent. in the net earnings, amounting to \$394,300. The mileage worked was but little larger this year. The comparison is with a very unfavorable season, in many respects, last year, but we are unable to make a direct comparison with previous years, for the reason that the Grand Trunk reports the earnings and expenses of nearly 300 miles of Great Western leased roads, while the Great Western, which made the reports previous to this year, reported only the earnings and expenses of the 527 miles which it owned and the *profit or loss* on the 296 miles of leased lines. But with this difference in the method of reporting, the gross and net earnings and working expenses of what now forms the Grand Trunk system have been given as follows:

	1880.	1881.	1882.	1883.
Gross earnings..	£1,429,425	£1,508,62	£1,556,070	£1,711,000
Expenses....	976,573	1,068,544	1,171,079	1,247,239
Net earnings..	£452,852	£475,618	£384,991	£463,851

Thus unless the gross earnings of 296 miles of Great

Western leased lines were less than \$240,000 in 1881, the gross earnings of the system must have been greater than last year, and the net earnings of the consolidated company this year, though 20 per cent. more than last year, are $2\frac{1}{2}$ per cent. less than the aggregate net earnings of the two roads s in 1881, and very little more than they were in 1880.

Compared with last year there was a decrease of 9 per cent. in the number of passengers carried, but a decrease of only 2 per cent. in the earnings of passenger trains. In freight there was a decrease of 9 per cent. in the number of tons carried, but an increase of $17\frac{1}{2}$ per cent. in the freight earnings. This is quite deceptive, however. A passenger or a car-load of freight going from Michigan to Montreal last year by way of the Great Western and the Grand Trunk would have appeared in the accounts of both, while this year, passing over the same route, it appears but once. There was, however, a decrease of $2\frac{1}{2}$ per cent. in ton-miles—from 670 to 653 millions—in the first half of this year, and in through traffic the decrease was much greater—from 383 to 330 millions, or $14\frac{1}{2}$ per cent. This is probably due to the diversion of traffic from the Great Western to the Canada Southern, in consequence of the union of the latter with the Michigan Central. In his speech to the stockholders Oct. 23 the President of the Grand Trunk described the course of the deliveries of freight by the Michigan Central to the Great Western to have been as follows, in the June half-year of successive years, in tons :

1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
429,000	351,000	369,000	369,000	174,000	174,000	174,000	174,000	35,900

He did not give the figures for 1881, when the railroad war should have made them larger than in previous years; but he shows that the traffic was already being diverted from the Great Western before the Canada Southern and the Michigan Central were united. Nearly all this freight s through, and there is besides that which passed from the New York Central over the Great Western to the Michigan Central, which has probably decreased in a similar proportion. It is an important loss for a line like the Great Western, but much less so for one like the Grand Trunk. The company paid $1\frac{1}{2}$ per cent. on its third preference stock from the profits of the last half of 1882, as well as $2\frac{1}{2}$ on the first and second preferences; while for the first half of this year it pays only on the first and second preferences. The last half of the year is almost always the more profitable, however. The bad winter weather, Sir Henry Tyler says, was the chief reason why net earnings were no larger.

EAST BOUND RATES, according to an announcement made last week, will be advanced 5 cents per 100 lbs. Monday, Nov. 28, making them 30 cents for grain and flour and 35 for most provisions, the same as the rates of last winter, which went into effect Dec. 1. The date of the advance this year is late, however. In 1879 the grain rate was made 30 cents Aug. 25, 35 cents Oct 13, and 40 cents Nov. 10, the latter being the winter rate. In 1880 a rate of 30 cents was maintained all summer, and the advance to 35 cents was made Nov. 27, the latter being the winter rate except during February, when it was 40 cents. In the fall of 1881 there were no rates. A rate of 20 cents was made nominally Jan. 28, but most of the traffic in February and March was carried on contracts at lower rates. The 30-cent rate just agreed upon is as low as any ever made by agreement for the winter. In every year but last year the winter rate has been higher, except when there has been a railroad war. Probably a rate above 30 cents might this year, when the foreign demand is not sharp reduce exports, but the movement for domestic consumption would probably be just about as great at 35 cents, and by far the larger part of the freight going eastward in winter is for home consumption. Last year the winter movement under the 30-cent rate was enormous and there seemed to be very little holding of grain in the West till spring for the opening of lake navigation, and the spring movement was decidedly light. There is now a great accumulation of wheat in Western elevators, which will be likely to go forward before the winter is over at the 30-cent rate, but which might be held till spring if the rate were higher.

The competition of the Mississippi River is not likely to have much effect this winter. It is likely to carry most when crops are heavy near the Ohio and Mississippi rivers, and large quantities are exported. This year the wheat crop is very poor and the corn crop not good near these rivers, and we have less than usual to export, and so far have exported very little. Of course when the grain is required for consumption in Eastern Ohio, Pennsylvania, New York and New England, it cannot be forwarded by the Mississippi. The corn crop in the South is much lighter than last year, however, and this will doubtless cause greater shipments for Southern consumption, part of which wi go by the river.

CHICAGO SHIPMENTS EASTWARD for the week ending Nov 7 by the complete report have been for four successive years :

Tons.....	1880.	1881.	1882.	1883.
45,013	53,229	43,682	45,769	

For seven successive weeks the shipments have been :

Sept. 21.	Sept. 30.	Oct. 7.	Oct. 14.	Oct. 21.	Oct. 31.	Nov. 7.
44,796	39,070	43,723	44,926	43,721	44,083	48,769

The shipments of the first week of November were slightly exceeded in the second week of September, but with that exception they were the largest since March.

The percentage of the shipments going by each road in the first week of November this year and last was:

	1882.	1883.		1882.	1883.
Ch. & Grand Trunk.	11.7	9.4	Fort Wayne	20.0	18.4
Mich. Central	27.3	23.8	C. St. L. & Pitts.	16.8	13.2
Lake Shore	16.6	13.0	Balt. & Ohio	7.6	6.0
Nickel Plate	6.2	Chic. & Atlantic	10.0

Compared with the previous week the chief changes in percentages are an increase of 2.9 by the Chicago, St. Louis & Pittsburgh, an increase of 2.8 by the Chicago & Atlantic, a decrease of 2.3 by the Baltimore & Ohio, and a decrease of 2.9 by the Nickel Plate. Both the new roads are short, that is, they have not carried since July 1 the proportion to which they are entitled by Mr. Fink's award, taking the whole period together. They have had very little of the high-class freight, and for pooling purposes everything is reduced to the number of tons of the lowest class that would produce the earnings, so that a road carrying 1,000 tons of freight of a class that pays 50 cents per 100 lbs. is charged with 2,000 tons. The Nickel Plate lacks most of having carried its proportion, so that its recent gains only gave it what it was entitled to. The Fort Wayne is over more than any road is short, and the Michigan Central is also over largely, the Grand Trunk and the Chicago, St. Louis & Pittsburgh very slightly. The Lake Shore and Nickel Plate together are short considerably more than the Michigan Central is over.

The incomplete report for the week ending Nov. 10 gives the through and local shipments of flour, grain and provisions by these eight roads as 50,449 tons, against 45,005 tons in the previous week of this year and 33,018 in the corresponding week of last year. Flour formed 7,139 tons, grain 31,280 and provisions 12,030 tons of the shipments last week.

THE TRUNK LINE PRESIDENTS' MEETING held last week is reported to have shown a general disposition to reasonableness greater than could have been expected in September, when not only was it shown that there had been a good deal of cutting, but not in every case did there seem to be a genuine purpose to stop it. This was really the most important thing about the meeting. Its principal action, so far as is known, was to resolve that the pooled business should be "evened" monthly, and that this should be done in the case of the trunk line shipments eastward, notwithstanding the fact that an appeal is pending concerning the percentages, and that the Arbitrator's decision may make another distribution necessary. Transfer of freight or payments of money in lieu thereof have not usually been made regularly to adjust percentages, because if left long enough they usually adjusted themselves pretty well, and so long as the rates were maintained the chief object of the pool was attained, though the roads did not get just the percentages agreed upon. But now that there have been efforts to increase business by cutting rates, it is felt that a monthly settlement would take away the chief motive for such irregular action, as no company is likely to make a great effort to secure a traffic one month when it must turn over the earnings from it at the end of the month. There is no change whatever in the contract. The agreement called for a settlement in the first place. All parties being satisfied to have the business go on without one, no regular settlements were made. Now the companies purpose to do only what in the first place they agreed to do.

THIS YEAR'S COTTON CROP has improved a little since Sept. 1, according to statistics collected and compiled with great care and skill by *Bradstreet's*, which has reports from its own agents from 595 of the 657 counties which last year had more than 500 acres, and received 1,093 reports for Nov. 1, covering 98 per cent. of the entire acreage of cotton. The crop is usually considered "made" by September, and so it is so far as cultivation can make it; but the weather after that date has not a little to do with the yield. Under ordinary circumstances favorable weather in the fall matures a "top crop," which adds considerably to the yield. The drought had so ripened the plants this year that not much of a top crop could be made with any kind of weather. The weather has been favorable, however, and where the plants had enough vitality left a top crop has been developed, adding a little to the yield that may be said to have been "in sight" at the beginning of September. Good weather for picking is also an important matter, for with unfavorable weather, frequent heavy rains and winds, a considerable amount of the matured bolls may be spoiled or damaged. The weather this year has generally been favorable for picking in the districts where most cotton is grown. The condition is somewhat worse, however, in the Carolinas and Tennessee. The reports show that 82 per cent. of the acreage had been picked Nov. 1. The Department of Agriculture reports the yield as probably about 14 per cent. less than last year, which means a decrease of about 1,000,000 bales, to 6,000,000.

CHICAGO-NEW YORK THROUGH PASSENGER TRAFFIC is doubtless the largest there is in the country between two places so distant from each other, and very likely the largest there is in any country. Nevertheless the amount of it is doubtless greatly exaggerated by the public. Data on the subject are not easily found, but the following paragraph published in a Chicago paper is so definite, and some of its facts agree so well with facts known to us, that it is probably true:

"The through passenger traffic between Chicago and New York is much larger than most people suppose. During the month of August the various lines running east from this city carried 2,117 first-class and 915 second-class passengers from Chicago to New York, and 3,179 first-class and 532 second-class passengers came from New York to Chicago."

This does not include the emigrant traffic, which was also unusually large during that month."

This gives 98 passengers from Chicago to New York and 190 passengers from New York to Chicago, who would fill full about two and two and a half cars respectively. Now there are at least 15 trains daily from New York to Chicago and 15 from Chicago to New York. Thus, had the travel been evenly distributed among the trains last August, there would have been ten each going west and seven going east. Evidently these trains are not supported by Chicago travel alone.

MR. JAMES MCHENRY has come to this country and announces his intention to break the lease of the New York, Pennsylvania & Ohio to the Erie. Mr. McHenry's grievance is that the stockholders, of whom he is chief, were not consulted. How great the interest of the stockholders in the property actually is may be judged by the fact that last year, when the profits of the road were greatest, the income available for interest and dividends was about \$1,000,000, while the interest on the funded debt, all of which must be paid before the stock can receive anything, is about \$5,400,000. Thus, the interest of the stock in the property will begin when its net income has been multiplied about five times, and the circumstances are scarcely conceivable that will make such an income possible.

At the last reorganization of the company the bondholders had it in their power to buy the road at foreclosure sale and wipe out the stock entirely, and this should have been done, because it was next to impossible that the property should ever become profitable enough to pay interest on all the bonds. But to satisfy the stockholders they were permitted to have stock in the reorganized company, with the condition that the management should be given to trustees representing the bondholders exclusively until full interest had been paid on the lowest class of bonds for three successive years, a time which will never arrive, or, which is equivalent, will arrive only when Lake Shore, Fort Wayne and Michigan Central shares are worth \$400 or \$500. Whether the lease to the Erie is equitable or not, therefore, is practically a matter of no moment to New York, Pennsylvania & Ohio stockholders.

BOSTON & ALBANY EARNINGS we said two weeks ago in the fiscal year ending with September last were "larger than in any other year in its history." We should have limited our comparison to the eight years covered by the table published in the article. The \$8,103,956 earned last year have been exceeded in three successive years, as follows:

1871-72.	1872-73.	1873-74.
\$9,259,589.	\$9,758,033.	\$8,963,128.

and in all these years the net earnings were also much larger than the \$1,945,052 netted last year. Indeed, the company's net earnings in every year from 1869 to 1876, inclusive, were more than \$2,000,000. Even the traffic so long ago was not so much less than now. In 1873 it had 318 millions of ton miles, in 1879 325, last year 373 millions—a gain of 17 per cent. in ten years. The increase in passenger traffic has been larger—from 120 millions in 1873 to 157 in 1883, or 30 per cent. The road prospered abundantly in these earlier days.

PAYING INTEREST COUPONS BEFORE THEY ARE DUE has been practiced sometimes by the United States when it had an overflowing treasury, but this was usually when money was tight, and it was thought that the Treasury accumulations should go to supply the public needs. The Chicago, Burlington & Quincy is the first railroad company, so far as we know, to anticipate interest in this way. It advertises that it will pay any coupon due Dec. 1, Jan. 1 or Feb. 1 next on presentation at any time after Nov. 7, with a discount of interest at the rate of 3 per cent. per annum. This means, of course, that the company has a great deal of money in its treasury and that it will be glad to get 3 per cent. on it during the time that will elapse before the debts are due for which the money is held. It is not often that a railroad company is able so to anticipate its debts.

A MEETING OF THE PASSENGER DEPARTMENT OF THE JOINT EXECUTIVE COMMITTEE will be held in New York Dec. 11 to endeavor to make some progress in perfecting the execution of the passenger agreement. Irregularities are numerous and much remains to be done before they can be removed or greatly lessened, but something has been gained, and the prospect is fair for making further progress. The last important public action of the Passenger Department is instructing the trunk lines not to sell tickets over certain specified connecting roads west of Chicago and St. Louis, including, we understand, most of the roads, which have been found indulging in prohibited practices.

A BOARD OF ARBITRATION is called for to hear the appeals from Mr. Fink's award of percentages, both of the trunk-line shipments and of the Chicago shipments eastward. This board will be formed by selecting two arbitrators for these special questions to sit with Mr. Adams, the permanent Arbitrator. These special arbitrators have not yet been selected.

Foreign Railroad Notes.

In Germany, at the end of 1881, there were 3,606 miles of railroad constructed with iron sleepers instead of wooden cross-ties. Of this road 2,364 miles had longitudinal and 1,242 miles transverse sleepers. During the year 1881 there was an increase of 380 miles laid with longitudinal and of 412 miles laid with transverse iron sleepers. Germany has used iron as a substitute for cross-ties much more extensively than any other country, and apparently with satisfactory

results, as renewals are largely made with iron, the whole length of new road constructed in 1881 being much less than the increase in road with iron sleepers, and the statistics show that there was a *decrease* of the ordinary road with T rails on wooden cross-ties amounting to 198 miles, and also a decrease of 53 miles in rails laid with chairs on wooden cross-ties. There is still 268 miles of road in Germany laid on stone supports, and 16 miles of such road were laid in 1881.

Iron does not seem to be used to any extent for this purpose elsewhere, except in Holland. Experiments were made in Belgium several years ago with some of the German systems, especially with a view to giving work to the suffering iron manufacture of that country; but they seem not to have been satisfactory, and we hear nothing more of the use of iron for that purpose there; though as iron is perhaps cheaper in Belgium than anywhere else in the world, and it imports its ties, it would seem that it is one of the most promising fields for the use of iron. Timber is not costly there, however, as it is brought from Baltic and North Sea ports at little cost for freight. It is somewhat remarkable that England should have been preceded by Germany in the extensive application of iron for this purpose.

It will be noticed that though there is more road on longitudinal than on transverse iron sleepers in Germany, the increase in 1881 was greatest in the latter.

THE SCRAP HEAP.

Tests of Automatic Freight Brakes.

Several tests were made of the American Brake Co.'s automatic brakes on Oct. 29, on the White River Branch of the St. Louis & San Francisco road, between Springfield, Mo., and Galloway. The tests were made under the supervision of Prof. S. W. Robinson, and a statement of the results is given below.

In the first series of tests the train consisted of engine and tender equipped with the steam driver and tender brakes; 12 empty coal cars equipped with the improved automatic brake, and one caboose, unequipped. The total weight of the train was 164 tons, and its length 429 ft. The stops made were as follows:

No. stops.	Speed in miles per hour.	Time in seconds.	Distance in feet.	Grade in feet per mile.
1	23	35	612	26.0 Down.
2	20	32	503	52.8 "
3	23	47	1,090	70.2 "
4	26	41	1,108	70.2 "
5	24	29	758	31.7 "
6	23	27	552	26.4 "
7	24	23	468	26.4 "
8	18	21	475	52.8 "
9	10 $\frac{1}{2}$	15	175	13.0 "
10	25	50	1,050	42.0 "
11	24	20	380	52.8 "

After the fifth stop the locking pawls were adjusted. The eighth and ninth stops were made while backing, allowing momentum to apply brakes. The tenth stop was made while backing, the time and distance being taken from the moment the engineer first shut off steam, and including all operations of the stop. It should be noted that in making a backing stop, when the desired speed is attained, the engineer shuts off steam and applies steam driver brake to draw the slack out of the train, then releases the steam brake, and allows the momentum to apply the automatic brake.

In the eleventh stop the engine was detached at full speed, the time being taken when the pin was pulled. The hand brake was set on the three forward cars.

The average distance for all the stops was 652 ft.; for all the ordinary forward stops, 727 ft.

In the second series of tests the train consisted of the engine and tender, 12 empty coal cars equipped with automatic brakes, three loaded coal cars, not equipped, two loaded box cars, not equipped, and a caboose, not equipped. The loaded cars were not together, but interposed between the empty cars. The total weight of the train was 281 $\frac{1}{4}$ tons, and its length was 585 ft.

The stops were made as follows:

No. stops.	Speed in miles per hour.	Time in seconds.	Distance in feet.	Grade in feet per mile.
1	16	30	394	43 Down.
2	28	39	437	52.8 "
3	22 $\frac{1}{2}$	35	408	37 "

The average distance for all the stops was 418 ft.; the average time, 32 seconds.

In all these tests the speed was taken from the speed-recorder; the grades from the profiles in the Chief Engineer's office. The distances were carefully measured.

Railroad Young Men's Christian Association.

The Kansas City Association reports for the year ending Aug. 31 last a total attendance of 31,300 at the reading room, with 3,210 persons using the bath-rooms. The total attendance at religious meetings was 7,640, and the lectures and entertainments were well attended. A large number of visits were made to the sick and injured, and assistance was extended to railroad men in distress.

The Association has now 233 members, a gain of 141 during the year. The total receipts from all sources were \$2,417, and the expenditures \$2,402, leaving \$15 on hand. The report of the Executive Committee says:

"Five railroad companies and one express company are contributing to the support of your Association, viz.: Chicago & Alton; Missouri Pacific; Atchison, Topeka & Santa Fe; Kansas City, St. Joseph & Council Bluffs, and Kansas City, Fort Scott & Gulf railroad companies, and the Pacific Express Co."

"Until the last year your committee has solicited subscriptions from the merchants and business houses in the immediate vicinity of the rooms, in West Kansas, leaving the broader field of the upper part of the city to the local Association. In the year past it was deemed expedient to join with the local Association and make but one canvass for the general good of the work. The result to us was diminished revenue, but we believe that harmony was promoted between the two associations and the business community."

"The revenue from membership fees indicates a very satisfactory growth of the Association."

"The foundation of the library has been laid by the zeal and energy of the Ladies' Auxiliary, through whose instrumentality your room has been furnished with a handsome bookcase, ready to be filled. Your committee call special attention to this fact, with the request that every member make it his business to place at least one good book on these shelves."

The officers of the Association are: W. H. Reed, President; W. J. Gould, Vice-President; E. A. Smith, Treasurer; George T. Coxhead, General Secretary; J. S. Ford, Chairman Executive Committee.

He was Scared.

Monday evening a brakeman on a freight train, while doing some work in the yard at Kasota, fell from the top of a freight car between the cars, and came down on his back across the rail. Just when he came down the truck of the rear car struck him and threw him clear off the track. Those who saw him fall supposed he was killed, but he was not hurt, not even scratched. He remarked when he gathered himself up that it was his last trip as a brakeman.—*St. Paul Pioneer-Press.*

General Railroad News

MEETINGS AND ANNOUNCEMENTS.

Meetings.

Meetings will be held as follows:

Baltimore & Ohio, annual meeting, at the office of the company in Baltimore, Nov. 19, at 10 a. m. Transfer books closed Nov. 8.

Boston & Providence, annual meeting, Nov. 21, at 11:30 a. m., at the passenger station in Boston.

Buffalo, New York & Philadelphia, special meeting, Dec. 31, to vote upon the question of authorizing the execution of a consolidated mortgage and the issue of bonds under it.

Eastern, annual meeting, in Boston, Dec. 12. The voting register for certifying holders will close Dec. 4.

New York & New England, annual meeting, at the Melona Hall, in Boston, Dec. 11, at 11 a. m. Transfer books closed Nov. 7.

Old Colony, annual meeting, at the United States Hotel, in Boston, Nov. 27, at 10:30 a. m.

Dividends.

Dividends have been declared as follows:

Catawissa (leased to *Philadelphia & Reading*), 3½ per cent, semi-annual, on the preferred stock, payable Nov. 16.

Central, of New Jersey, 1½ per cent, quarterly, payable Dec. 1. Transfer books close Nov. 17. This is the first dividend under the lease to the *Philadelphia & Reading Co.* The last dividend paid on the stock was 2½ per cent, quarterly, April 10, 1876.

Chicago, Burlington & Quincy, 2 per cent, quarterly, payable Dec. 15, to stockholders of record Nov. 26.

Cleveland & Pittsburgh (leased to *Pennsylvania Company*), 1½ per cent, quarterly, payable Dec. 1.

Delaware & Bound Brook (leased to *Philadelphia & Reading*), 2 per cent, quarterly, payable Nov. 14.

North Pennsylvania (leased to *Philadelphia & Reading*), 2 per cent, quarterly, payable Nov. 26.

Railroad and Technical Conventions.

The *Railway Car Accountants' Association* will hold its next annual meeting in St. Louis on the third Tuesday in May, 1884.

Railway Passenger and Freight Conductors' Mutual Aid and Benefit Association.

The annual meeting of this Association was held in Chicago, Nov. 14. The receipts of the Association as shown by the reports were last year \$49,000, and the payments for deaths and disabilities were \$45,000. There were 21 deaths during the year. There are now 1,467 members.

New York Railroad Commission.

The New York Railroad Commissioners have been sitting in Utica, N. Y., this week hearing testimony and arguments upon certain complaints made as to freight rates over the Utica & Black River road and charges made against the road of discrimination in freight rates. These charges are denied by the company.

Trunk Line Presidents' Meeting.

A meeting of the presidents of the Trunk Lines was held at Commissioner Fink's office in New York last week. It is stated that it was resolved to carry out strictly the east-bound pool contract. West-bound pool matters were also discussed, but no action was taken.

The rates on dressed meats were discussed, but no change was made. It was decided to make the rate on grain 30 cents from Chicago to New York.

It was resolved to refuse to make through rates or exchange business with the Delaware, Lackawanna & Western unless road should agree to maintain rates. It is stated that the Grand Trunk concurred in this action.

ELECTIONS AND APPOINTMENTS.

American Society of Civil Engineers.—At the regular monthly meeting in New York, Nov. 7, the following gentlemen were elected members of the Society: Lieutenant Thomas M. Baily, Corps of Engineers, U. S. A., Charleston, S. C.; Henry W. Brinckerhoff, Brooklyn, N. Y.; Ebenezer Wheeler, Sault Ste. Marie, Michigan.

Atlantic & Pacific.—The following circular from General Superintendent F. W. Smith is dated Albuquerque, N. M., Oct. 25. "Mr. J. J. Blower is hereby appointed Local Auditor of this company, with headquarters at Albuquerque, in effect Oct. 26. He will have charge of all accounts, vouchers, pay-rolls, all receipts and disbursements and all papers relating to same, and all claims whatsoever against this company. His instructions to agents, conductors and all interested in the receipts and disbursements of this company will be respected and obeyed."

Baltimore & Ohio.—Third Vice-President Orland Smith will, for the present, act as General Manager of the Trans-Ontario divisions in place of Bradford Dunham, who has gone to the Louisville & Nashville. His office is at Newark, Ohio.

Central, of Georgia.—Mr. W. H. Lucas has been appointed General Agent for the state of Florida, with office in Jacksonville.

Central Massachusetts.—This company was organized in Boston, Nov. 10, as successor to the Massachusetts Central, with the following directors: Henry F. Hills, Amherst, Mass.; Wm. Mixer, Hardwick, Mass.; Wm. M. Gaylord, Northampton, Mass.; J. Edwin Smith, Worcester, Mass.; Samuel N. Aldrich, Marlboro, Mass.; Elisha S. Converse, Walden, Mass.; Lyman Hollingsworth, Cohasset, Mass.; Samuel Atherton, Charles R. McLean, Wm. T. Parker, Thomas H. Perkins, Moses W. Richardson, Henry Woods, Boston. This is very nearly the same board as that of the old company.

The Board afterwards elected Stephen N. Aldrich President; George Seymour, Clerk and Treasurer.

Central Pacific.—Mr. Wm. Hood has been appointed Chief Engineer, in place of S. S. Montague, deceased. Mr. Hood has been on the road 17 years as assistant to Mr. Montague.

Chicago, Burlington & Quincy.—The following circular has been issued from the General Freight Agent's office:

"Mr. H. D. Mack, having been appointed General Agent at Rock Island, is hereby given charge of commercial matters at Davenport, Rock Island, Moline, Barstow and Port Byron Junction, and agents at these points will report to him and receive instructions from him, in the same manner as they have heretofore reported to the Commercial Agent."

Chicago, St. Paul, Minneapolis & Omaha.—Mr. Francis B. Clarke has been appointed General Traffic Manager, in place of Mr. J. H. Hiland, who remains with the company as General Freight Agent. Mr. James T. Clark is appointed Assistant General Freight Agent.

Chippewa River & Menominee.—This company has elected F. Weverhauser President; O. H. Ingram Vice-President; E. W. Culver General Manager; Wm. Irvin Secretary and Treasurer; E. D. Marshall General Solicitor.

Concord.—Messrs. John H. Pearson, of Concord, N. H., and Nathan Parker, of Manchester, N. H., have been chosen directors in place of J. Thomas Vose and Francis B. Hayes, resigned.

The board has elected Frederick Smyth President pro tem. in place of J. Thomas Vose, resigned.

Delaware Water Gap and Southwestern.—The officers of this new company are: President, Christopher Fallon, Philadelphia; Directors, Edward R. Fell, Reese D. Fell, George W. Hobson, C. R. Haskins, G. M. Kinsler, A. D. Lindsay, Joseph J. McGirr, W. E. Taylor.

Detroit, Grand Haven & Milwaukee.—Mr. S. R. Callaway has been appointed General Manager. He is General Manager of the Chicago & Grand Trunk also.

East Tennessee, Virginia & Georgia.—At the annual meeting in Knoxville, Tenn., Nov. 14, the following directors were chosen: George F. Baker, Calvin S. Brice, E. W. Cole, H. C. Farnestock, Henry Fink, J. M. Johnson, E. H. R. Lyman, C. M. McGhee, John T. Martin, R. H. Richards, E. J. Sanford, George I. Seney, Samuel Shetbar, George F. Scott, Samuel Thomas.

Evansville & Terre Haute.—President D. J. Mackey will hereafter act as Superintendent also. Mr. J. H. Hedden has been appointed Master of Transportation and Mr. John Torrance Master Mechanic.

Fort Worth & Denver City.—Mr. J. T. Granger has been appointed Treasurer of this company. Mr. George Strong has been appointed Cashier.

Highland Junction.—The office of this company has been removed from No. 51 Chambers street to No. 31 Broad street, New York.

Houston & Texas Central.—Mr. A. Faulkner has been appointed General Passenger and Ticket Agent in place of C. B. Gray, resigned.

International, of Maine.—At the annual meeting in Bangor, Me., Nov. 8, the following directors were chosen: E. R. Burpee, W. B. Ives, D. E. McFee, T. S. Morey, John H. Pope, F. A. Wilson, Noah Woods. The board elected John H. Pope President; Noah Woods, Vice-President.

Little Rock & Fort Smith.—General Manager Henry Woods announces the following appointments: J. A. Woodson, Traffic Manager; Theodore Hartman, Superintendent; H. G. Allis, General Auditor. These officers are also appointed to the same positions on the Little Rock, Mississippi River and Texas road.

Little Rock, Mississippi River & Texas.—The following appointments are announced by General Manager Henry Woods: J. A. Woodson, Traffic Manager; Theodore Hartman, Superintendent; H. G. Allis, General Auditor. The officers also hold the same positions on the Little Rock & Fort Smith road.

Louisville, Evansville & St. Louis.—The office of Mr. G. Evans, Secretary and Treasurer, has been removed from Boston to Louisville, Ky. The office of Mr. W. J. Sherman, Engineer of Bridges and Buildings, has been removed from Evansville, Ind., to Louisville.

Louisville & Nashville.—The following circular from the office of Vice President Milton H. Smith is dated Louisville, Nov. 10.

"Mr. Bradford Dunham is appointed General Manager. He will direct the operations of the transportation, mechanical and road departments. Office at Louisville, Ky. Appointment effective Nov. 12 1883."

The office of General Manager has been vacant for several months, since the resignation of Mr. de Funik. Mr. Dunham has been for some time General Manager of the Trans-Ohio divisions of the Baltimore & Ohio.

Manhattan.—At the annual meeting in New York, Nov. 14, the following directors were chosen: Jay Gould, Cyrus W. Field, Russell Sage, R. M. Gallaway, Edward M. Field, George J. Gould, Sidney Dillon, Samuel Sloan, John H. Hall, W. E. Connor, George S. Scott, José F. Navarro and H. F. Dimock.

Metropolitan Elevated.—At the annual meeting in New York, Nov. 14, the following directors were chosen: Joseph S. Stout, Charles Duggin, Jacob Berry, Herman O. Armour, John D. Slavyack, Morillo H. Gillett, James H. Leverich, Sylvester H. Kneeland, Daniel Torrance, Peter W. Gallaudet, William K. Souter.

Mexican National.—Mr. John Harding is appointed General Master Mechanic of the Northern Division, vice Thomas Milian, resigned. Appointment took effect Nov. 5.

Missouri Pacific.—Mr. H. McLaughlin is Resident Engineer, with office in St. Louis. Mr. C. C. Barr is Resident Engineer of the St. Louis, Iron Mountain & Southern Division, with office in St. Louis.

Natchez, Jackson & Columbus.—Mr. J. M. Kern has been elected Secretary in place of J. H. Fitzpatrick, resigned. Mr. W. H. Lingard has been appointed General Auditor, with office in Natchez, Mississippi.

New England General Passengers' Association.—At the recent semi-annual meeting in Boston the following officers were chosen: President, Walter Pearce, Hartford & Connecticut Western; Vice-President, N. P. Loomis, Jr., Passumpsic; Secretary, C. A. Waite, Worcester & Nashua; Executive Committee, W. M. Durfee, Providence and Worcester; Jacob Sprague, Jr., Old Colony, and F. H. Kingsbury, Cheshire Railroad.

New York, New Haven & Hartford.—Mr. Charles P. Clark has been chosen a director in place of Chester W. Chapin, deceased. Mr. Clark is Second Vice-President of the company.

New York, Texas & Mexican.—The following circular is dated Victoria, Tex., Nov. 1:

"Mr. John G. Conlon is this day appointed Master Mechanic of this company, with office at Victoria. He will have supervision over the machinery and motive power, and car and water supply departments. All employés within these departments will report to and receive directions from him."

Norwich & New York Transportation Co..—At the annual meeting in Norwich, Conn., Nov. 7, the following directors were chosen: Thomas B. Eaton, Frederick J. Kingsbury, Waterbury, Conn.; Francis H. Dewey, Worcester, Mass.; S. M. Felton, Jr., Wm. T. Hart, James H. Wilson, Boston; Charles W. Copeland, W. Bayard Cutting, R. Saydam Grant, New York. The board elected Gen. James H. Wilson President; Oliver S. Johnson, Jr., Secretary and Treasurer.

Ohio.—The directors of this new company are: Arthur L. Conger, Richard P. Flood, David E. Hill, George R. Hill, Arthur Latham, Lewis Miller. Office at Akron, Ohio.

Ohio River.—Mr. E. G. Allen is appointed General Superintendent, with office at Parkersburg, W. Va. He was formerly Superintendent of the Massachusetts Central road.

Pennsylvania.—Mr. S. D. Kennedy has been appointed Passenger Agent of the Long Branch District, with office in Newark, N. J. He will have especial charge of passenger business to and from the Long Branch line and all points on the New Jersey divisions.

Raleigh & Gaston.—Mr. J. B. Martin has been appointed Auditor, in place of J. M. Pool, deceased.

Rochester & Pittsburg.—At the annual meeting in New York, Nov. 14, the following directors were chosen: Frederick A. Brown, Walston H. Brown, Henry Day, John L. Hall, A. L. Hopkins, Adrian Iselin, Jr., August Kountze, George D. Morgan, Wheeler H. Peckham, Andrew L. Peirce, George W. Parsons, George F. Stone, Frederick D. Tappan.

Rome, Watertown & Ogdensburg.—Mr. W. W. Currie has been appointed Master of Transportation, with office at Oswego, N. Y. This is a new office on this road.

Salina, Lincoln & Decatur.—The officers of this new company are: President, S. C. Smith, Beatrice, Neb.; Vice-President, George V. Morford, Omaha, Neb.; Secretary and Treasurer, C. T. Boggs, Lincoln, Nebraska.

Texas & St. Louis.—It is said that Mr. W. R. Woodard, now Superintendent of the Hannibal & St. Joseph road, will be appointed General Manager of this road in place of George W. Ristine, resigned.

Transcontinental Traffic Association.—Mr. George W. Ristine has accepted the office of Commissioner of this Association, to which he was elected last week.

Union Pacific.—Mr. Frank Rearden has been appointed Division Master Mechanic of the Idaho Division (including the Utah & Northern and the Oregon Short Line), with office for the present at Pocatello, Idaho. The following appointments of Assistant Division Master Mechanic are also made: W. J. Hemphill at Eagle Rock, Idaho; W. H. Lewis at Montpelier, Idaho; R. Croft, at Logan, Utah.

Mr. George J. Cowan has been appointed Assistant General Western Passenger Agent, with office in Portland, Oregon. His territory will include Oregon, Washington and British Columbia.

Utica & Black River.—Mr. Theodore Butterfield, heretofore General Passenger Agent, has been appointed General Freight Agent also.

Wabash, St. Louis & Pacific.—Mr. C. S. Lape has been appointed Division Master Mechanic, with office at Tilton, Illinois.

PERSONAL.

—Mr. Francis B. Hayes has resigned his position as a director of the Concord Railroad Company.

—Mr. J. Thomas Vose has resigned his position as President and a director of the Concord Railroad Company.

—Mr. D. W. C. Rowland has resigned his position as General Superintendent of the Louisville & Nashville road, taking effect at once.

—Mr. William Kerrigan, Superintendent of the St. Louis, Iron Mountain & Southern Division of the Missouri Pacific, was married at Charleston, Mo., last week to Miss Sophia Dermot of that place.

—Col. Ezra Miller, the inventor of the Miller platform and coupler, has been elected to the New Jersey Senate from Bergen County. He owns a large farm at Mahwah in that county, where he resides.

—Ex-Governor Nat Head died at his residence in Manchester, N. H., Nov. 12, aged 54 years. Gov. Head was for many years a prominent man in the State in which he was born and always lived. He was a brick-maker on a large scale, but at one time he went into the railroad contract business, and built part of the Concord & Portsmouth, the Suncook Valley road and several other New England lines.

—Mr. Charles Howard, an old and well-known citizen of Detroit, Mich., died in that city Nov. 8, aged 73 years. Mr. Howard was for a number of years a railroad contractor, the firm being S. & C. Howard. They built the Detroit & Milwaukee, several lines in Wisconsin and other roads. Some 30 years ago Mr. Howard served a term as Mayor of Detroit. For several years past he had retired altogether from business.

—Col. J. Condit Smith died at the New York Hotel, in New York, Nov. 9, aged 53 years. He was born in Morris County, N. J., and educated as a civil engineer, his first work being on the Illinois Central road, but afterwards became a contractor. During the war he served as a quartermaster and on Gen. Sherman's staff. After leaving the army he held a number of contracts, building portions of the Buffalo, New York & Philadelphia and other roads, and levees along the Mississippi. His last work was the building of the Chicago & Atlantic road, and he was Vice-President of that company at the time of his death.

—Gen. Herman Haupt, in retiring from the office of General Manager of the Northern Pacific, bids farewell to the officers and employés of the road in the following circular letter:

"In severing my connections with the Northern Pacific Railroad Co. I desire to express my appreciation of the zeal, intelligence and fidelity with which my efforts to discharge official duties have been seconded by you. If any one prominently connected with the service has failed in loyalty to the interests which it was his duty to protect, or has used his official position to advance private and personal interests to the neglect of the higher duties and obligations which he owed to the company, I have failed to discover it.

"My personal relation with heads of departments have been particularly cordial, and I trust that the harmony that now exists between them may remain unbroken.

"One of my chief regrets in leaving the service of the company arises from the fact that my plans for the eleva-

tion of the service, the improvement of the condition and for making suitable provision for the care and comfort of the various classes of employés can not now be carried into effect.

"I will add that so far as these plans had been communicated to President Villard he has been in sympathy with them, and gave orders at one time to erect commodious boarding-houses on all the divisions, to be furnished with lavatories, reading-rooms and other conveniences, but the execution of the order was suspended for financial reasons. Mr. Villard is disposed to do all that circumstances will permit to promote the comfort and improve the condition of all classes of employés, and is worthy of their loyalty and respect.

"Wishing all the largest possible measure of happiness and prosperity, I subscribe myself your friend."

TRAFFIC AND EARNINGS.

Grain Movement.

For the week ending Nov. 3 receipts and shipments of grain of all kinds at the eight reporting Northwestern markets and receipts at the seven Atlantic ports have been, in bushels, for the past ten years:

Northwestern shipments.		P.C.	Atlantic receipts.		
Yr. ar.	receipts.	Total.	By rail.	By rail.	P.C.
1874.	2,286,443	2,338,408	799,288	31.6	1,797,450
1875.	3,868,681	3,869,314	1,366,611	35.2	3,191,155
1876.	3,144,650	3,822,151	1,39,994	35.1	2,789,964
1877.	4,140,393	2,829,458	470,422	16.4	4,880,768
1878.	4,668,619	3,503,917	700,479	21.7	4,527,683
1879.	5,110,058	4,688,181	1,255,164	26.9	6,195,593
1880.	6,889,584	5,752,475	1,971,215	32.5	7,278,857
1881.	3,098,642	3,616,025	2,036,925	56.2	3,914,464
1882.	6,157,189	4,313,001	2,214,837	51.4	3,797,921
1883.	6,020,959	4,895,345	2,026,253	41.4	3,503,519

Thus the receipts of the Northwestern markets for the week were 135,000 bushels less than in the corresponding week of last year and \$69,000 less than 1880, but much more than in any other year. They were also 236,560 bushels less than in the previous week of this year, and the smallest since the middle of August. Nevertheless, they are unusually large for the season; the large receipts last year at this time were exceptional, and it is only in 1880 that a long period of very heavy receipts lasted so long. In the corresponding week of last year the wheat receipts were 750,000 bushels more than this year, the corn receipts nearly the same, the receipts of other grain 657,000 bushels less.

The shipments of these markets for the week were 588,000 bushels more than in the corresponding week last year, and were equalled only in 1880. They were 135,000 bushels less than in the previous week of this year and the smallest for 12 weeks. The rail shipments were less than last year, when they were exceptionally great that week, but they were very large, and nearly the same as in 1881, when the rate was half as high. The shipments down the Mississippi were 178,105 bushels, or 3.6 per cent. of the whole. Not one-fourth of the shipments were wheat. The corn shipments were a third more than the receipts. There is a large stock of wheat in Western elevators, but very little corn.

The Atlantic receipts for the week were 297,000 bushels less than in the corresponding week of last year, and were the smallest since 1876. There were also 735,000 bushels less than in the previous week of this year, and the smallest since July. Compared with last year there is a decrease of 1,586,000 bushels (62 per cent.) in wheat, but an increase of 978,000 (295 per cent.) in corn, and smaller increases in other grains.

Exports from Atlantic ports for this week ending Nov. 4 for four successive years have been:

	1880.	1881.	1882.	1883.
Flour, bbls.	162,882	88,812	191,546	147,483
Grain, bush.	5,396,836	1,921,209	1,752,778	1,837,617

Including flour the exports this year were less than last year, or little more than in 1881, but nearly 60 per cent. less than in 1880.

Coal.

Anthracite coal tonnages for the ten months ending Nov. 3 are reported as follows, the tonnage in each case being only that originating on the line to which it is credited—in some cases considerably less than the actual tonnage passing over the line:

	1883.	1882.	Inc. or Dec.	P.C.
Phil. & Reading.	10,256,314	9,630,839	I.	625,375
Shamokin and Sun'.	1,050,363	1,069,867	D.	1,904,158
min. Branch.	133,580	148,917	D.	15,337
North & West Branch.	465,283	—	L.	465,283
Pennsylvania Canal.	431,427	437,798	D.	6,371
Lehigh Valley.	5,403,456	4,989,491	L.	413,965
Pennsylvania & N. Y.	189,898	161,480	L.	19,418
Del., Lacka. & West.	4,231,691	3,845,845	L.	382,836
Del. & Hud. Canal Co.	3,423,617	2,963,072	L.	446,545
Pennsylvania Coal Co.	1,254,240	1,186,355	L.	67,885
State Line & Sullivan	57,551	52,180	I.	5,371
Total anthracite.	26,894,420	24,508,034	I.	2,385,486

It is probable that the total production this year will not be far from 32,000,000 tons.

The North & West Branch road was not opened last year.

The tonnage of the Central Railroad of New Jersey is included in the Philadelphia & Reading statement in both years for purposes of comparison.

The total tonnage for eight years has been as follows:

1883.	26,894,420	1879.	22,123,522
1882.	24,508,034	1878.	14,283,208
1881.	22,341,225	1877.	14,926,835
1880.	19,576,972	1876.	15,976,086

The weekly statements, upon which this is based, differ somewhat in form from the report made by the Official Accountant, and the figures are less reliable than his, but give more details of the traffic.

Semi-bituminous tonnages reported for the ten months ending Nov. 3 are as follows:

	1883.	1882.	Inc. or Dec.	P.C.
Cumberland, all lines.	2,128,848	1,111,690	I.	1,027,158
Huntingdon & Broad Top.	163,317	238,730	D.	75,413
East Broad Top.	36,223	76,605	D.	40,382
Tyrone & Clearfield.	2,354,383	2,345,119	I.	9,234
Barclay & Snow Shoe.	206,031	192,498	I.	13,533
Total semi-bituminous.	4,898,802	3,964,672	I.	934,130

The changes shown this year are largely the result of the long strike in the Cumberland Region last year. The total increase is large, and much of it is due to diminished use of anthracite for steam purposes.

Bituminous coal tonnage for the ten months ending Nov. 3 are reported as follows:

	1883.	1882.	Inc. or Dec.	P.C.
Barclay R. & Coal Co.	573,758	31,945	D.	2,187
Allegheny Reg., Pa. R. R.	367,846	459,324	D.	62,473
Penn and Westmoreland.	1,145,228	1,062,776	I.	82,452
West Penna. R. R.	328,372	293,502	I.	34,370
Southwest Pa. R. R.	69,740	90,617	I.	9,123
Pittsburgh Reg., Pa. R. R.	526,259	553,580	D.	27,321
Total bituminous.	2,741,203	2,761,744	D.	20,541

Changes in bituminous tonnages have been considerable,

but the total result has been very nearly the same in both years given.

Coke tonnages for the ten months ending Nov. 3 are reported as follows:

	1883.	1882.	Inc. or Dec.	P.C.
Bellefonte & Snow Shoe.	15,659	17,887	D.	2,228
Allegheny Reg., Pa. R. R.	65,701	94,005	D.	28,304
Penn and Westmoreland.	184,240	219,437	D.	35,197
West Penna. R. R.	90,375	99,421	D.	9,049
Southwest Penna. R. R.	1,768,583	1,482,754	I.	285,829
Cornwallisville R. R.	504,864	469,601	I.	35,263
Pittsburgh R. R.	—	—	—	—
Total coke.	2,629,422	2,883,105	I.	246,317

These tonnages are all over the Pennsylvania Railroad.

The increase this year comes entirely from the great coke region east and southeast of Pittsburgh, the other regions all showing decreases.

The coal tonnage of the Pennsylvania Railroad Division, Pennsylvania Railroad, for the ten months to Nov. 3 was as follows:

	1883.	Line of	From other	1882.	Line of	From other	1882.
		road.	lines.	Total.	Total.	Total.	Total.
Anthracite.	598,863	1,417,446	2,016,309	1,405,963	1,417,446	2,016,309	1,405,963
Semi-bituminous.	2,560,454	530,542	3,094,996	2,938,666	2,560,454	530,542	2,938,666
Bituminous.	2,467,335	5,403	2,472,738	2,459,838	2,467,335	5,403	2,459,838
Coke.	2,136,912	492,516	2,629,422	2,383,105	2,136,912	492,516	2,383,105

Total.

These tonnages are all over the Pennsylvania Railroad.

The increase this year comes entirely from the great coke

region east and southeast of Pittsburgh, the other regions all

showing decreases.

The coal tonnage of the Pennsylvania Railroad Division,

Pennsylvania Railroad, for the ten months to Nov. 3 was as follows:

	1883.	Line of	From other	1882.	Line of	From other	1882.
		road.	lines.	Total.	Total.	Total.	Total.
Anthracite.	598,863	1,417,446	2,016,309	1,405,963	1,417,446	2,016,309	1,405,963
Semi-bituminous.	2,560,454	530,542	3,094,996	2,938,666	2,560,454	530,542	2,938,666
Bituminous.	2,467,335	5,403	2,472,738	2,459,838	2,467,335	5,403	2,459,838
Coke.	2,136,912	492,516	2,629,422	2,383,105	2,136,912	492,516	2,383,105

Total.

Pacific Coast Business.

At the meeting of the Transcontinental Traffic Association last week, it was stated that an agreement was made under which the Northern Pacific will withdraw from all California business, and the Central and Southern Pacific will withdraw from Oregon business and will also pay the Northern Pacific a subsidy in consideration of its withdrawal. Under this agreement no through rates will be given to California points over the Northern Pacific, and local rates will be charged by the steamer line between Portland and San Francisco. Under this agreement the Central Pacific can continue its present contract system on through freights.

RAILROAD LAW.**Liability of Sleeping Car Companies.**

A dispatch from Pittsburgh, Pa., Nov. 12, says: "In the Supreme Court this morning the judgment of the lower court was affirmed in the suit of Gardner vs. the Pullman Palace Car Co. The case has attracted widespread attention. Mr. Gardner secured a verdict of \$300, having been robbed of valuables while sleeping in one of the Pullman cars. The Supreme Court opinion held that the company, while liable in action only as an inn-keeper or common carrier, yet a reasonable and proper degree of care is imposed on them. The object in taking passage in such cars is to permit a passenger to sleep; while in that helpless condition a duty rests on the company to exercise reasonable care and caution against the valuables of a passenger being stolen from his bed or from his clothes or person."

OLD AND NEW ROADS.

Atlantic & Pacific.—The Boston *Advertiser* says: "There is much speculation among investors and others interested in railroads, as to the future position of the Atlantic & Pacific Railway. As is well known, the controlling interest in this road is jointly owned by the St. Louis & San Francisco and the Atchison, Topeka & Santa Fe companies, and its line forms connecting tangent to those of the Atchison system and the Southern Pacific, which cross each other at Deming, many miles to the southward of the Atlantic & Pacific. The St. Louis & San Francisco and the Southern Pacific being closely allied, the extension of the Atlantic & Pacific to the Pacific coast, as originally contemplated, was stopped when the Needles was reached, and a branch of the Southern Pacific built to connect with it. Meantime, the California Southern Railway has been built by Boston capital from San Diego to Colton, Cal., and was to have been continued to a junction with the Atlantic & Pacific. The termination, for the present at least, of the latter road at the Colorado River, leaves the California Southern with its eastern end in the air. The reports that this road is to be sold to the Southern Pacific are very distasteful to the Boston capitalists, whose interests are largely concerned with both the Atchison and the California Southern, and have revived the counter-rumors that the Atchison people will purchase the California Southern and connect it with the Atlantic & Pacific, thus giving the Atchison virtually a line of its own to the Pacific coast. Of course such a move would be vigorously fought by the Southern Pacific, and, doubtless, by the St. Louis & San Francisco also. As the majority of the Atlantic & Pacific stock—over \$51,000,000—is pooled in the hands of three trustees, and must be voted as a unit by them, it is apparent that the Atlantic & Pacific must be neutral in the matter. It is a bone of contention, and can take no more part in the fight between the big railway dogs than any other home. The \$3,200,000 of stock to be issued, on the completion of the road, to the subscribers for blocks, is another matter about which much speculation has been indulged. The Seligman syndicate of New York has the option of calling the balance on these blocks, or of giving them up to the subscribers, and thus far no indication has been given as to which course the syndicate will pursue. Altogether, Atlantic & Pacific will continue to be an interesting problem for some time to come."

Bedford, Springville, Owensboro & Bloomfield.—Arrangements are being made for the lease to this company of the road now operated by the Indiana & Illinois Southern Co. from Switz City, Ind., west to Merom on the Wabash River, 31 miles. This company will then operate the line from Bedford, Ind., to the Wabash, 72 miles.

Boston & Albany.—The following order from General Superintendent Wm. H. Barnes is dated Boston, Nov. 12: "This company will, on Sunday, Nov. 18, at 12 o'clock noon, adopt a new standard of time, which will be 16 minutes slower than our present standard."

"All telegraph operators will be at their offices 10 minutes before 12 o'clock, noon, Boston time, on Sunday, Nov. 18, and remain until the new time has been received."

"All officers and employés, including station agents, train and section men, will, at 12 o'clock (noon) of Sunday, Nov. 18, report to the nearest station, and correct their watches so as to correspond with the new time as received by the telegraph operators, and all clocks of this company must be changed in like manner. At points where there is no telegraph office, agents and employés will, on Saturday, Nov. 17, obtain correct time from passenger train conductors, and on Sunday, Nov. 18, at 12 o'clock (noon) will set their clocks and watches back 16 minutes, comparing and correcting them on Monday, Nov. 19, with watch of conductor of first passenger train arriving."

"Employés on all trains moving on the road Sunday, Nov. 18, will arrange to be at telegraph stations at noon and obtain the new time."

"The new standard time will be that of the 75th meridian, and will be designated as Eastern Time."

Boston & Maine.—The report of this company is so far completed that the following statement of earnings for the year ending Sept. 30 is made:

1882-83.	1881-82.	Inc.	P. c.
Gross earnings.....	\$2,991,430	\$2,850,730	4.8
Expenses.....	2,032,680	1,948,481	5.3
Net earnings.....	\$938,750	\$902,249	4.0
Per cent. of exps....	68.6	68.3	0.3

Extraordinary expenses, for new equipment, second track, etc., amounted to \$106,377, interest to \$245,000 and 8 per cent dividends to \$560,000, leaving a surplus balance of \$27,373 for the year. This statement includes rentals in expenses.

Canadian Pacific.—In relation to the Government guarantee upon the stock, the following statement has been issued from the New York office of the company:

"The Canadian Pacific Railway Co., in order to insure to its stockholders a fixed minimum dividend on their shares, thus constitute the stock an absolutely reliable security for permanent investment, has deposited with the Government of the Dominion of Canada money and securities, in consideration of which that Government on Nov. 10th instant, executed a contract with the company and Bank of Montreal under which it bound itself to pay into that bank,

as trustee for the shareholders, on the 17th day of February and Aug. 1 in each year, until Aug. 17, 1893, inclusive, a sum of money sufficient to pay a semi-annual dividend of 1½ per cent. on the entire outstanding capital stock of the company. Out of this sum the Bank of Montreal, by the same contract, covenants with the railway company to pay to the stockholders half yearly dividends at the above rate. It is the intention of the railway company to supplement this guaranteed dividend by an additional 1 per cent. semi-annually during construction, thus making an annual dividend on the stock of 5 per cent., and after the entire completion of the railway (which it is expected will be accomplished at latest by the spring of 1886) by such further dividends as its earnings will warrant."

"Notwithstanding this arrangement, securing a minimum dividend for 10 years of 3 per cent. per annum, the unearned subsidies granted to the company under its charter in money and lands remain wholly unimpaired and will be obtained from the Government as heretofore as construction progresses, and will therefore be available for the completion and equipment of the railroad."

Central Massachusetts.—This company was organized at a meeting held in Boston, Nov. 10, by the bondholders who joined in the purchase of the Massachusetts Central at foreclosure sale. The meeting adopted the following:

"Voted, That the capital of this company be and is hereby fixed at an amount equal to the aggregate of the first mortgage debt of the Massachusetts Central Railroad Co., the unpaid interest thereon up to and including the interest due July 1, 1883, and the sum of \$3,500,000, said last-named sum being the amount of the capital stock of the Massachusetts Central; and that the directors be and hereby are authorized to issue preferred and common stock and scrip convertible stock, in accordance with the provisions of chapter 64 of the acts of the Legislature of Massachusetts of 1883."

By-laws for the new company were also adopted and other necessary preliminary action taken for the organization of the company.

Chicago, Milwaukee & St. Paul.—On the Southern Minnesota Division track is now laid and trains running to Woosocket, Dak., the junction with the James River Branch 12 miles west of the late terminus at Forestburg and 86 miles from the junction with the Sioux Falls Branch at Egan.

The extension of the Hastings & Dakota Division is now completed and opened for business to Ipswich, Dak., 26½ miles west of the late terminus at Aberdeen, and 31½ miles from Minneapolis. Work is progressing beyond the new terminus.

Chicago & Northwestern.—This company's Menominee River line is now completed to Iron River, Mich., 4 miles beyond the late terminus at Stambaugh. This line now extends from the junction with the Marquette line at Powers to Iron River, 73 miles, with a branch from Florence to Crystal Falls, 16 miles.

Chicago, St. Paul, Minneapolis & Omaha.—It is said that this company will next season extend its Neillsville Branch from Neillsville, Wis., northeast to Warsaw, about 75 miles, through a lumber country.

Cincinnati, Indianapolis, St. Louis & Chicago.—This company makes the following statement for September:

Earnings.....	\$250,005
Expenses (57.2 per cent.).....	143,005

Net earnings..... \$107,000

The gross earnings show a decrease of 6 per cent., but the net earnings show a considerable gain.

Cincinnati, New Orleans & Texas Pacific.—It is reported from Cincinnati that a traffic contract has been concluded between this company and the Pittsburgh, Cincinnati & St. Louis, under which all the southern business from the Pennsylvania system will be given to this road, while this company agrees to give all its north and east bound business to the Pennsylvania at Cincinnati. It is said that the agreement provides for a very close alliance between the two roads.

Cincinnati, Van Wert & Michigan.—Track on this road is now laid to Celina, O., 11 miles southward from the late terminus at Shane's Crossing and 43 miles from Paulding. On the southern end the track is laid to Gilberton, 9 miles northward from the late terminus at Ansonia and 17 miles from the southern terminus at Greenville. A gap of 15 miles remains between Gilberton and Celina, which is all to be completed to reach Mechanicstown.

Cleveland, Youngstown & Pittsburgh.—On the extension of this company's line from Alliance, O., to Stubenville, track is reported laid from Alliance, O., southward through Minerva, a distance of 23 miles, leaving 5 miles to be completed to reach Mechanicstown.

Columbus & Eastern.—Chief Engineer F. J. Aid writes as follows under date of Nov. 10: "Connection with the leased portion of the Ohio Central Railroad was made Nov. 5 at Hadley Junction, O. Track is laid to date 23 miles, 12 miles more than the last report. All the branches to the coal mines are being pushed forward rapidly. Surveys for an independent line to the Union Depot and Columbus and for terminal arrangements are being made. It is the purpose of the projectors of this enterprise to have it open for business to the principal coal mines by Dec. 10 next."

Columbus, Hope & Greensburg.—Work has been resumed on the tracklaying, and the rails are now being put down between Hope, Ind., and Columbus.

Delaware Water Gap & Southwestern.—This company has filed articles of incorporation to build a railroad from a point in Londonderry township, in Bedford County, Pa., through Bedford, Blair, Huntingdon, Mifflin, Juniata, Snyder, Northumberland, Schuyler, Carbon and Monroe counties to the Delaware River, near the Water Gap. The distance is about 225 miles. It is said to be part of projected new line between Pittsburgh and New York.

Des Moines, Osceola & Southern.—This road is now completed and opened for traffic to Leon, Ia., 5 miles eastward from the late terminus at Decatur City.

Detroit, Bay City & Alpena.—Track has been laid on this road from the junction with the Mackinaw Division of the Michigan Central at Wells, Mich., east to Rifle River, four miles. As soon as the bridge there is completed, regular trains will be put on from Wells to East Tawas, 8 miles.

Gainesville, Jefferson & Southern.—An agreement has been completed for the consolidation with this company of the Walton Railroad Co., which owns a line from Walton, Ga., to Social Circle, on the Georgia Railroad, 10 miles. The stockholders of the Walton Co. will receive Gainesville, Jefferson & Southern stock for their stock and will also receive \$18,000 in bonds to equalize the debt.

Georgia Pacific.—Work is now in progress on an extension from Fayette Court House, Ala., eastward 32 miles to Day's Gap, where several coal mines have been opened. Regular trains now run between Columbus, Miss., and Fayette Court House.

Grand Trunk.—A dispatch from Boston, Nov. 14, says: "It is rumored that the Grand Trunk proposes to move for a lease of the Fitchburg and the Hoosac Tunnel & Western lines, in order to secure another line to Boston in connection with the new West Shore road, a lease of which, it is believed, has been virtually arranged, thus securing an independent line from Chicago to New York. A conference of directors of the Grand Trunk and Boston & Lowell was had to-day to consider the informal proposition of the former to lease the latter. The matter was discussed at length, but no agreement for a lease was reached, nor was any formal proposition for one accepted. The Central Vermont is supposed to be interested with the Grand Trunk in the proposed lease."

Highland Junction.—This company is making arrangements for the formation of a syndicate to place its bonds.

A new survey is to be made for the approaches to the proposed bridge over the Hudson River, based upon an elevation of the bridge about 50 ft. higher above the river than the first survey provided for. On the east side of the river the survey will be continued to the New York & New England road at Hopewell Junction. It is thought that the greater elevation will avoid a considerable grade in making this connection, and also that the right of way can be more cheaply and easily secured, as the new line will pass through less valuable property.

Illinois Central.—Chicago papers state that this company has decided not to change its time at present to the newly adopted standard, but will use Chicago time between Chicago and Cairo, Dubuque time in Iowa, and New Orleans time between Cairo and New Orleans. General Superintendent Jeffery says the company cannot adopt standard time just now, because it has too many suburban trains leaving this city daily. Passengers would become confused and would miss their trains. As soon as the city of Chicago adopts the standard the company will adopt it.

Kent Northern.—This road was formally opened for traffic Nov. 7. It is 27 miles long, extending from Richibucto, N. B., to Kent Junction on the Intercolonial road.

Kentucky Central.—This company makes the following statement for the month of September:

	1883.	1882.	Increase.	P. c.
Earnings.....	\$91,154	\$75,510	\$15,644	20.7
Expenses.....	45,059	33,769	11,290	33.4

Net earnings..... \$46,095 \$41,741 \$4,354 10.4

Per cent. of expenses..... 49.4 44.7 4.7 ...

The mileage worked was 188 miles this year, and 150 miles in September of last year.

Long Beach.—This company has been organized to build a railroad from Sea Side Park, N. J., down Long Beach to a point near Barnegat Inlet, thence across the bay to the main land and then southward to junction with the Camden & Atlantic near Absecon. The distance is about 45 miles. The company intends to buy the Tuckerton Railroad and use it as part of its line. The company is controlled by the Pennsylvania Railroad Co., and the road will be an extension of that company's shore line to Absecon and Atlantic City.

Maine Central.—At the regular meeting of the board last week, the report of the special committee on the Boston & Maine matter was received, but it was suggested that there had probably been further correspondence between the directors of the Boston & Maine Co. and the committee, no action was taken, and the report was laid on the table.

The President submitted the following statement of earnings for the year ending Sept. 30:

	1882-83.	1881-82.	Increase.	P. c.
Earnings.....	\$2,864,615	\$2,621,117	\$241,498	0.2
Expenses.....	1,839,706	1,683,701	156,005	0.3

Net earnings... \$1,024,909 \$939,416 \$85,493 9.1

Per cent. of exps.... 64.2 64.1 0.1 ...

In this statement the earnings of the European & North American road, leased from April 1, 1882, are included for the whole of both years, for purposes of comparison.

Mexican Railroad Notes.—The following notes are from the Mexican Financier of Oct. 27:

It is believed that by Dec. 1 the entire road-bed of the main-line of the Mexican Central will be graded. The most of the contractors will then go over to the Pacific line, the construction of which will probably be pushed rapidly from the junction with the main line at Lagos, in order to give communication with Guadalajara, the second business city of Mexico, as soon as possible.

The length of the Mexican Central from Mexico to Paso del Norte will be 1,932 kilometres, or 1,210 miles.

When it was first proposed to start a street railway in Chihuahua many persons, who did not know that there is hardly a town in all Mexico where a street railway has not proven most profitable, sneered at the idea, and predicted failure. But the enterprise has already proven so successful that it is proposed to extend the track from the Plaza to and along the Alameda. The company has also established a freight-car service, running from the Mexican Central station into the city.

The patronage accorded the three stage lines running daily from Parral to Jimenez on the Mexican Central indicates that the proposed railway branch from the Central to Parral will be highly successful.

The inspection of the section of the Mexican National from Acámbaro to San Luis Potosí, for the month of September, shows that the grading and track-laying between Acámbaro and Salvatierra having been completed, the work on the masonry for the 18 bridges and 52 culverts was continued. Early in September the fine iron bridge over the Rio Lerma was finished. The work of replacing with better material the earth-ballast on the track between Salvatierra and Celaya will be finished in about two months. On the third division 600 men were employed during the month. The survey of the line between Celaya and San Luis Potosí began on June 11, 1882, by Engineers Burr and MacAlpine. Mr. Burr made the survey from Celaya to the Rio de Dolores, 96 kilometres, and Mr. Mac Alpine located the line from San Luis Potosí to the same river, 148 kilometres. The average maximum grade is 1½ per cent., and for short distances it is 1 per cent. The maximum radius is 72 metres. The grading was begun last April and at the end of September was completed as far as San Miguel de Allende, 56 kilometres, and work is now proceeding on the section between the latter place and Atotonilco. The track has been laid from Celaya to Soria, 16 kilometres, and now that the work to Morelia has been finished, the track will be rapidly laid as far as San Miguel. The number of workmen for the month on this division was 2,000.

The track of the Mexican International Railway (Hunt-

ington-Frisbie) has been laid as far as kilometre 150, and will soon be completed as far as the place called Dos Hermanos, where there are warm springs, making 200 kilometres in all.

The government of the state of Morelos has authorized Mr. Isidor Berthier to organize a company to build a railway from Cuernavaca to Toluca. Mr. Berthier proposes to organize the company among French capitalists. The terms of the concession guarantee an annual interest of 10 per cent. upon the capital. The railway will traverse the rich valley of Cuernavaca, exchange the products of the cold and hot lands between Toluca and Cuernavaca, respectively, and also forms an important feeder to the Mexican National and the Interoceanic. This is the first railway enterprise in this country to engage French capital.

Michigan Central.—A dispatch from Lockport, N. Y., Nov. 10, gives the following statement of the progress made last week on the new bridge of the Canada Southern Division over the Niagara River: "The cantilever bridge at Niagara has made great progress this week. The work of erecting the cantilever arms across the river has gone forward with remarkable rapidity. On the American side four of the seven sections composing the river arm are now in place, and it is expected that the seventh, or last, section will be underway by Monday or Tuesday next. On the Canada side work is now going forward on the fourth section, and the last section on the cantilever arm on that side is expected to be reached on Wednesday next. The cantilever arms reach out from each tower 175 ft. toward the center of the river. When both are completed 350 ft. of the space across the river will have been bridged, leaving an open space over the centre of the river of 120 ft. yet to be filled. This will be filled by a truss which will be put in by the same appliances and in the same manner as the river arms of the cantilever. At the present rate of progress and if the weather continues good it is probable the workmen who are now approaching each other from either side will shake hands by Nov. 20. Certainly they will be able to do this by the 24th. It is now a moral certainty that the bridge will be ready for a train of cars by Dec. 1, the day it was contracted to be finished."

"The work upon the approach to the bridge on the Canada side, which is now the only thing that can delay its opening, has made rapid progress this week. The earth embankments about the abutments have been nearly completed. Fifteen of the twenty-four foundations for the iron trestle approach have been finished, and the others are well under way. The work on this end of the Welland Cut-off has also made rapid strides. Double track has been laid from the Niagara Falls station south, and it is expected that to-day the old roadbed, which obstructs the connection of the new grade, will be removed, and that trains will hereafter run entirely on the new grade. The bridge back of the museum was completed on Tuesday and track was laid across it on Wednesday. Two construction trains are now at work on this end, and double track will be laid and ballasted between Niagara Falls and Clifton next week."

"The work of painting the tower of the bridge on this side was completed on Thursday. The engineer corps lined the bridge on Wednesday, and found it remarkably true to its position. It was out of line in only one or two places, the greatest variation being less than one quarter of an inch."

Mobile & Ohio.—This company makes the following statement for October and the four months of its fiscal year from July 1 to Oct. 31:

	October		Four months	
	1883	1882	1883	1882
Earnings	\$250,313	\$267,675	\$725,070	\$698,927
Expenses	150,710	149,578	498,578	552,449
Net earnings	\$116,965	\$228,492	\$146,478	
Per cent. of expenses	56.3	68.5	79.0	

For the four months there was an increase of \$26,143, or 3.7 per cent., in gross earnings, with a decrease of \$55,871, or 10.1 per cent., in expenses, the result being a gain in net earnings of \$82,014, or 56.0 per cent.

Nashville, Chattanooga & St. Louis.—The bridge at Rock Island, Tenn., on the Sparta Branch has been at last completed after many delays, and tracklaying has been begun from Rock Island toward Sparta.

New York, Lake Erie & Western.—This company's statement for August and the eleven months of its fiscal year from Oct. 1 to Aug. 31 is as follows:

	August		Eleven months	
	1883	1882	1882-83	1881-82
Earnings	\$2,580,956	\$1,843,144	\$20,180,113	\$18,093,560
Expenses	1,480,891	1,005,068	13,868,861	12,018,163
Net earnings	\$1,100,065	\$748,076	\$6,320,252	\$6,076,400
P. c. of exps.	57.4	59.4	68.7	66.4

The gross earnings continue to show a large increase in August, and the net earnings, which have shown decreases for several months, also increased largely in August, so largely as to change the result for the year from a decrease to a gain.

For the eleven months there was an increase of \$2,093,553, or 11.6 per cent., in gross earnings, accompanied by an increase of \$1,849,701, or 15.4 per cent., in expenses; the result being a gain in net earnings of \$243,852, or 4.0 per cent.

As heretofore noted, the expenses this year from May 1 include all the cost of operating the leased New York, Pennsylvania & Ohio road, but the gross earnings include only the 63 per cent. of the earnings of that road which go to the lessee; the 32 per cent. of gross earnings paid to the lessor company as rental not appearing in the accounts at all.

New York & New England.—Many reports have been current in relation to this company. There will be an attempt made at the annual meeting next month to effect a change in the management. It has been reported that the New York, New Haven & Hartford Co. was trying to secure control, but this is denied by officers of that company. It has also been said that the Pennsylvania Railroad Co. had been trying to secure stock, but this is doubtful. Messrs. Lee, Higginson & Co., of Boston, and Chase & Higginson, of New York, have issued a circular asking stockholders for proxies for the avowed purpose of securing general change in the management.

New York, Philadelphia & Norfolk.—The engineers of this company are locating the line from Delmar, Md., southward to Pocomoke City, on the Pocomoke River, a distance of 26 miles. The line is not very far from that of the Eastern Shore road.

New York, West Shore & Buffalo.—The report is renewed that a lease of this road to the Grand Trunk is under negotiation. The terms, it is said, include a guarantee of the West Shore bonds.

One track is now all laid between Syracuse and Buffalo, and work is going forward as fast as possible on the ballasting and on the second track.

Northern Pacific.—The Bradley suit to enjoin the issue of second-mortgage bonds has been removed to the United States Circuit Court.

Another suit to enjoin the issue of the new bonds has been

begun in the New York Supreme Court, and the Court has issued the usual preliminary injunction and order to show cause.

Work is progressing steadily on the branch from Helena, Montana, to Wickes, and the company expects to have it completed by the end of the year.

Work progresses somewhat slowly on the extension of the road from Superior City, Wis., east to Ashland. This line crosses all the streams running northward into Lake Superior, and there are a great many bridges on it. At one point nearly three miles of trestle will be required over a swamp.

The new track from Sauk Rapids, Minn., to Minneapolis some work is in progress. It has been delayed somewhat by difficulty experienced in securing the right of way.

Ohio.—This company has filed articles of incorporation to build a railroad from Akron, O., west through Summit, Medina, Lorain, Huron and Seneca counties to Tiffin, a distance of about 90 miles.

Ohio River.—Tracklaying has been begun on this road at its northern end near Moundsville, W. Va., and is to be continued southward.

Oregon Railway & Navigation Co.—This company makes the following statement for October and the four months of its fiscal year, from July 1 to Oct. 31:

	October		Four months	
	1883	1882	1883	1882
Earnings	\$655,050	\$523,294	\$2,206,454	\$1,997,434
Expenses	334,000	231,846	1,065,750	895,622
Net earnings	\$221,050	\$201,448	\$1,140,704	\$1,101,812
Per cent. of exps.	51.0	44.3	48.3	44.8

For the four months there was an increase of \$209,020, or 10.5 per cent., in gross earnings, with an increase of \$170,128, or 19.0 per cent., in expenses, the result being a gain in net earnings of \$83,892, or 3.5 per cent.

Pennsylvania Company.—The following circular applies to the Jeffersonville, Madison & Indianapolis, and the Indianapolis & Vincennes roads, operated by this company; it is dated Columbus, O., Nov. 5:

"On Sunday, Nov. 18, 1883, at noon, the Standard Time and time-tables on these lines will be changed to conform to the 90th Meridian or Central Time, which is 16 minutes slower than Indianapolis time, which is the present standard."

"The change will not affect leaving time of trains when considered from local time."

Penokee & Agogebic.—This company has been organized to build a branch from the Wisconsin Central at Penokee, Wis., eastward to Lake Agogebic in Michigan, a distance of about 60 miles. The company is controlled by the Wisconsin Central.

Pittsburgh, Cincinnati & St. Louis.—The following circular from James McCrea, Manager, is dated Columbus, O., Nov. 5; it applies to the Chicago, St. Louis & Pittsburgh road also:

"On Sunday, Nov. 18, 1883, at noon, the Standard Time and time-tables on the lines of these companies will be changed to conform to the 90th Meridian or Central Time, which is 28 minutes slower than the present standard, or Central time."

"The change will not affect leaving time of trains when considered from local time."

Rome, Watertown & Ogdensburg.—The following statement is published for the month of September:

	1883	1882	Inc. or Dec.	P. c.
Earnings	\$172,848	\$188,307	D. \$15,459	8.2
Expenses	94,844	114,629	D. 19,785	17.2
Net earnings	78,004	\$73,678	I. \$4,326	5.9
Per cent. of exps.	54.9	60.0	D. 6.0	

Expenses include renewals, which have been large this year. The loss in gross earnings is due chiefly to loss of through coal traffic, which was carried over the Western Division at extremely low rates.

Rutland.—The Boston *Advertiser* of Nov. 18 says: "An investigating committee, consisting of P. W. Clement, of Rutland, ex-Gov. John W. Stewart, of Middlebury, Vt., and George H. Ball, of Worcester, appointed from the board of directors of the Rutland Railroad, has made a report to the full board of an investigation into the official connection of John B. Page and Joel M. Haven with the Rutland Railroad during the 16 years that they were respectively President and Treasurer. An expert's examination of the books of the company is said to show that an immediate deficiency of \$45,000 in the cash accounts exists; that the stock has been over-issued to the extent of \$239,000 par value (\$40,000 market value), that during the 16 years there were disbursements amounting to upward of \$250,000, for which no proper vouchers can be found; that unwarranted manipulations of accounts were made, and that the receipts and expenditures during the period named aggregated \$26,000,000. It is alleged that funds of the road were used for private purposes in entirely unauthorized ways. The directors decline to make public just now the details of their discoveries. The committee was authorized to continue its investigation, and was empowered to use all legal measures to recover the company's funds. Mr. Barnard, of Boston, was added to the committee. It is said that the expert's report was referred to the sub-committee, with full powers; a further report is to be made when the examination is complete."

Ex-Gov. Page claims that his money, to a considerable amount, found its way into the company's treasury through the late treasurer.

St. Louis & San Francisco.—The following order is issued by General Manager Rogers:

"At 10 o'clock a. m. of Sunday, Nov. 18, 1883, the time by which this road is operated will be changed from Jefferson City time to the new standard time, which is the time of the 90th meridian, and is 9 minutes faster than Jefferson City time."

"Therefore, at 10 o'clock a. m. of Sunday, Nov. 18, all clocks in offices on the line of this road, and the watches of all employés of this company, will be set ahead 9 minutes from the present Jefferson City time, so that they will conform to the new standard time to be used by this company."

"The Master of Transportation will be particular to call the attention of his division superintendents and train dispatchers to this change, and to see that they arrange for the meeting points of trains which may be effected by the change in setting clocks and watches nine minutes ahead."

"Employés located at stations where there are no telegraph offices will get the correct standard time as soon as possible after 10 o'clock, on the 18th, from the conductor of the first train passing their station."

"Train dispatchers will require all conductors and engineers on the line of the road at the hour named above to answer by telegraph that they have changed their time to correspond with the new standard, and must get the same answer from all conductors and engineers on the line of the road before they start out from the terminus of their divisions."

"Heads of departments will see that this circular is supplied to all the employés in their respective departments, and see that each one acknowledges its receipt before Sunday, the 18th; and on Sunday, the 18th, after 10 o'clock, advise the head of his department that he has changed his watch in accordance with the new standard."

Securities on the New York Stock Exchange.—The following securities have been placed on the lists at the New York Stock Exchange:

Chicago & Western Indiana., \$3,300,000 first-mortgage 6 per cent. bonds and \$10,500,000 general mortgage 6 per cent. bonds.

New York, West Shore & Buffalo., \$5,000,000 additional first-mortgage 5 per cent. bonds.

Pittsburgh, Bradford & Buffalo., \$100,000 additional first-mortgage 6 per cent. bonds.

Rochester & Pittsburgh., \$8,860,000 consolidated mortgage 6 per cent. bonds.

Southern Pacific, of Arizona., \$9,604,000 first-mortgage 6 per cent. bonds.

Shousetown, Clinton & Frankfort.—The Pittsburgh *Railroad Reporter* says: "This road has been graded ready for the rails, and will be in running order by Jan. 1. The road is 8 miles long, and connects the Pittsburgh & Lake Erie Railroad with the famous Frankfort Springs. The new line opens up a large extent of coal land and a valuable agricultural district. The stockholders of the railroad are connected with the Grand Lake Coal Company."

South Pennsylvania.—Preparations for active work are being made. The contracts for the great tunnels along the line and their approaches have been let as follows: Blue Mountain tunnel, Patrick Keating & Co.; Kittatinny tunnel, Evans & Ackerman; Tuscarora tunnel, Walker, Dacey & Co.; Sideling Hill tunnel, O'Brien & Rodgers; Ray's Hill tunnel, McMahon, Shanahan & Co.; Allegheny Mountain tunnel, Charles McFadden. These are all well known and substantial contracting firms. The Laurel Hill tunnel contract is not yet ready; it is the only remaining one. Work on these tunnels will be prosecuted through the winter.

Stillwater & St. Paul.—The first mortgage bondholders of this company met in Philadelphia to arrange some new plan respecting the payment of interest. The line is leased to the St. Paul & Duluth Railroad Co. at an annual rental of \$20,000. The latter road owns nearly all the stock and a large amount of the bonds, of which \$855,000 are still outstanding, bearing 7 percent. interest. The bondholders agreed a few years ago to accept 5 per cent. interest for a specified period, during which it was hoped that the amount of outstanding bonds would be reduced from the sale of lands to such an extent as would enable the payment of the full 7 per cent. This hope has not been realized, and the time is about expiring; hence the necessity of making some new arrangement. Several propositions were presented at the meeting, but as none of them seemed to be entirely acceptable the whole subject was referred to a committee of seven. A proposition which seems to meet with some favor is that which provides for the payment of interest to the extent allowed by the rental, the balance to be paid in scrip to be redeemed from the sale of the lands, of which the company holds 51,000 acres in Minnesota.

Terre Haute & Indianapolis.—The following order has been issued by General Superintendent Hill:

"At noon, Sunday, Nov. 18, 1883, the standard time and the time tables of this road will be changed to conform to the 90th Meridian time, which is 16 minutes slower than Indianapolis time, our present standard. This change will not affect the time of trains when considered from local time."

Texas & Pacific.—A suit has been begun in the New York Superior Court to enjoin the transfer of the land grant of the New Orleans Pacific Co. and the issue of bonds secured upon the lands. The plaintiff is a stockholder of the old New Orleans, Baton Rouge & Vicksburg Co., and he claims that the land grant originally made to that company was not properly transferred to the New Orleans Pacific, now owned by the Texas & Pacific.

Texas & St. Louis.—Notice is given to stockholders and bondholders of the Texas & St. Louis Co. in Missouri and Arkansas and the Texas & St. Louis Co. in Texas, that the time in which they may become parties to the readjustment agreement of Nov. 1, 1883, will expire on Dec. 1 next. On or before that date all bondholders and stockholders must deposit their securities with the readjustment trustees at the Third National Bank in St. Louis or the National Bank of Commerce in New York, where copies of the agreement can be obtained. Certificates will be issued for the securities deposited.

Toledo, Cincinnati & St. Louis.—A dispatch from Cincinnati, Nov. 9, says: "An order for the sale of the Cincinnati Northern Railroad has been issued by the Superior Court to satisfy a judgment of \$24,000, the balance on a purchase of real estate, only \$8,000 of which is now due. The road will be sold as soon as the Master can do so under the form of law."

Union Pacific.—This company's Utah & Northern line is now completed to the junction with the Northern Pacific at Garrison, Montana, 11 miles northward from the late terminus at Deer Lodge, and 454 miles from the junction with the main line at Ogden, Utah.

Work has been begun on two short branches of the Utah & Northern line in Montana, one from Stuart to Anaconda and the other to the St. Lawrence mine. Both branches are intended to reach and serve mining districts.

A location has been adopted for a branch from the Oregon Short Line to Boise City, the capital of Idaho. The branch will leave the main line at Caldwell, where it crosses the Boise River, and will run eastward up that river. It will be about 30 miles long and will have moderate grades and no heavy work on the grading.

Wabash, St. Louis & Pacific.—The following order has been issued by General Superintendent Andrews:

"Commencing at 12 o'clock, noon, Sunday, Nov. 18, 1883, the standard of time for this railway will be that of the ninetieth meridian, or Central time. This is nine minutes slower than Chicago and one minute faster than St. Louis time. Train and engine men and other employés will be governed accordingly and take precautions to enable them to correct their time at the proper hour, and be governed by this standard thereafter. Arrangements have been made to send the time from Washington University, St. Louis, at 11 a. m. each day, direct to all telegraph stations on the system. Operators will acknowledge its receipt to their chief operators, as instructed by Superintendent of Telegraph, and see that their